Broad Agency Announcement

Urban Reconnaissance through Supervised Autonomy (URSA)

TACTICAL TECHNOLOGY OFFICE

HR001118S0036

May 10, 2018

Contents

PART I: OVERVIEW INFORMATION

- **Federal Agency Name** – Defense Advanced Research Projects Agency (DARPA), Tactical Technology Office (TTO)
- **Funding Opportunity Title** – Urban Reconnaissance through Supervised Autonomy (URSA)
- **Announcement Type** – Initial announcement
- **Funding Opportunity Number** – HR001118S0036
- **Catalog of Federal Domestic Assistance Numbers (CFDA)** – Not Applicable
- **Dates**
    - Proposers Day: May 1, 2018
    - Networking and One on One Discussions: May 1, 2018
    - BAA Posting Date: May 10, 2018
    - Abstract Due Date and Time: May 24, 2018; 12:00PM Eastern
    - Abstract Feedback: Goal of May 31, 2018 depending on number of abstracts received
    - BAA Questions Due: May 31, 2018
    - Full Proposals Due: July 3, 2018; 1:00PM Eastern
- **Concise description of the funding opportunity –** The goal of the URSA program is to assess the feasibility and effectiveness of integrating unmanned systems, sensor technologies, and advanced autonomy algorithms to enable improved techniques for rapidly discriminating hostile intent and filtering out threats in complex urban environments.
- **Total amount anticipated to be awarded –** Up to $22.6M for Phase 1.
- **Anticipated individual awards** – Multiple awards are anticipated.
- **Types of instruments that may be awarded** – Procurement contract or other transaction for prototype.
- **Agency contact**
    - Points of Contact

      The BAA Coordinator for this effort can be reached at:
      HR001118S0036@darpa.mil

      DARPA/TTO
      ATTN: HR001118S0036
      675 North Randolph Street
      Arlington, VA 22203-2114

PART II: FULL TEXT OF ANNOUNCEMENT

I. Funding Opportunity Description

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

Reconnaissance, surveillance, and target acquisition within urban terrain remains a vexing problem for the U.S. military. Urban spaces can mask threat personnel as they move and obscure threats as they approach. Additionally, the urban environment includes civilians who must be protected, challenging the military's ability to claim Positive Identification (PID) of combatants. Enemy combatants may seek to co-locate with noncombatants and mimic their appearance, actively impeding the U.S. military's ability to discriminate quickly between the two populations. Current state-of-the-art reconnaissance systems and sensors are not sophisticated enough to overcome the challenges posed by obstructed urban sight lines and fleeting targets, or to reliably discriminate between threats and noncombatants. Therefore, U.S. forces must rely on dismounted warfighters to actively patrol urban areas to ferret out threats and maintain safety and security. Continuous patrolling is manpower and time intensive and exposes those warfighters to significant risk.

The Urban Reconnaissance through Supervised Autonomy (URSA) vision is to develop technology to enable autonomous systems operated and supervised by U.S. ground forces to detect hostile forces and establish PID before any U.S. troops come in contact with them. The URSA program seeks to overcome the complexity of the urban environment by combining new knowledge about human behaviors, autonomy algorithms, integrated sensors, multiple sensor modalities, and measurable human responses to discriminate the subtle differences between belligerents and innocent bystanders. DARPA believes that through an autonomous, active process of accumulating and filtering data from multiple sources and sensing modalities, it will be possible to rapidly and reliably discriminate between threats and non-combatants. In addition to traditional sensing modalities, DARPA seeks to leverage natural or created stimuli to elicit behavioral responses among humans in an area and sense differing reactions in threats and noncombatants. Key aspects of this program include the ability to exploit new dimensions of evidence such as human behaviors or responses that indicate hostile intent; autonomously fuse information from multiple sources to optimize area search and confidence; and employ advanced algorithms to rapidly synthesize and accumulate evidence over time to filter out threats and enable sufficiently accurate PID.

The URSA program will explore situations and behaviors that will enable identification and discrimination between innocent civilians and individuals with hostile intent. Although the development of these probing behaviors will be an output of the program, a simple example of an URSA engagement may help clarify the program's intended end-state and related technical challenges. For example: a static sensor located near an overseas military installation detects an individual moving across an urban intersection and towards the installation outside of normal pedestrian pathways. An unmanned aerial system (UAS) equipped with a loudspeaker delivers a warning message. The person is then observed running into a neighboring building. Later, URSA detects an individual emerging from a different door at the opposite end of the building, but confirms it is the same person and sends a different UAS to investigate. This second UAS

determines that the individual has resumed movement toward a restricted area. It releases a non-lethal flash-bang device at a safe distance to ensure the individual attends to the second message and delivers a sterner warning. This second UAS takes video of the subject and determines that the person's gait and direction are unchanged even when a third UAS flies directly in front of the person and illuminates him with an eye-safe laser dot. URSA then alerts the human supervisor and provides a summary of these observations, warning actions, and the person's responses and current location.

Performers will be expected to explore a full range of URSA user scenarios to maximize the utility of their proposed URSA approach. Performers will also be expected to examine the full solution trade space. There are many facets of the above example that illustrate the breadth of the trade space. Ground robotics could provide superior endurance and payload compared to UAS, and these robots could persistently patrol a critical pedestrian area. Static modes could combine sensing, local computation, and limited effects such as loud speakers or illumination methods. Jamming specific electromagnetic spectrum frequency ranges might cause specific reactions and provide unique insights. Crowds often have a wisdom of their own, and introducing a stimulus near a crowd might reveal individuals that react differently than others. Providing discriminatory capability is just as vital in security scenarios where deployed forces are static as when warfighters are actively moving into and through an area. Nowhere is the URSA vision more challenged than detecting and discriminating enemy snipers from noncombatants within the urban landscape, and snipers remain a pernicious threat to warfighters exactly because their detection and discrimination is so challenging.

While the implementation of an URSA system and associated concept of operations may appear straightforward, it requires significant advances in active sensing, behavior understanding, and autonomous decision making to determine intent.

A. Program Overview

The objective of this BAA is to establish the feasibility and effectiveness of achieving the URSA vision by developing and evaluating prototype capabilities. BAA research will focus on answering the following key questions:

- What combinations of sensors, personnel signatures, and behaviors best enable discrimination between threats and non-combatants?
- What is the potential of various actions (e.g., Unmanned Aircraft System (UAS) overflight, loudspeakers, spotlight-like/spray-like/firecracker-like effects, jammed communications) to spur additional detectable responses that help to further differentiate between threats and noncombatants?
- How can the system accumulate sufficient evidence over time, e.g., by making multiple sensor passes from different perspectives in combination or various stimulating actions, to reliably, accurately, and autonomously identify and characterize threats while posing low risk to noncombatants?
- Can this entire process be executed rapidly enough to meet dismounted operational requirements, including timelines, situational awareness and safety?
- What is the appropriate level of autonomy and appropriate degree of human-in-the-loop interaction with the system to make rapid and accurate decisions?

- Can the system track and re-identify targets with sufficient robustness to qualify as actionable intelligence?

For this effort, performers should only consider operations in a complex, non-permissive 3D urban environment with a mix of threat and non-threat individuals. Proposers should focus on the critical enabling exploitation, autonomy and decision support algorithm technologies and features of URSA, prioritizing development and demonstration of new algorithms and techniques to rapidly discriminate between threats and noncombatants, as opposed to sensor, effector and platform development. For affordability, where possible, proposers should leverage existing hardware, software, simulation infrastructure and physical interfaces that are adequate for demonstrating URSA algorithms and techniques. It is envisioned that the demonstrations will be conducted using an evolutionary framework that progressively builds up capability over time, culminating in live field demonstrations.

To further assist proposers in developing initial URSA concepts and scoping their effort, DARPA offers the following additional guidance regarding the desired solution space.

Capabilities of interest include, but are not limited to:

- Behavior-based and other novel means of threat detection, classification, recognition, identification, and classification
- Intelligent sensor placement and/or unmanned system employment to enable optimized autonomous area search that efficiently gathers and fuses data from multiple sources and optimizes threat discrimination in militarily relevant, dense urban environments
- Autonomous identification of appropriate stimulating actions and timing of implementation to interact with or elicit behaviors in personnel of interest that assist in deducing their intent
- Information fusing techniques to iteratively synthesize and accumulate threat discrimination evidence from multiple data sources
- Mission planning approaches that account for a thinking, dynamic adversary
- Risk-based decision theory and implementation in accordance with an ethical framework
- Behavior science to model expected human reaction to proposed autonomous system behaviors
- Ability to explore how, to what degree, and where to integrate a human supervisor into the decision loop
- Ability for the human supervisor to retain insight into why certain autonomy decisions are being made and to interact with autonomous systems for making independent assessments

Technical elements for consideration include, but are not limited to:

- Complex human behavior recognition and understanding
- Precursor actions or behaviors that are indications of hostile intent prior to hostile action
- Unique approaches for leveraging existing data sets and exploiting novel data sets
- Coordinated planning and behaviors
- Cognitive-behavioral models
- Novel decision frameworks
- Detection of fleeting personnel
- Leveraging of existing or emerging modeling and simulation engines/environments, to include interfaces/visualizations
- Person re-identification

- 3D planning and searching techniques
- Reactive behaviors such as object detection/object avoidance
- Sensor system area coverage approaches for a militarily relevant dense urban environment
- Multiple phenomenology cueing and fusion
- Active sensing, e.g., maneuvering or cueing/reallocating system resources to improve detection
- Integration of dynamic and static sensors to improve detection
- Machine learning
- Triaged display of expert system logic and system status
- Consumer-technology based human interface modalities
- Approaches for developing personnel data, scenarios and scripts for training the URSA system and input data for validation demonstrations

DARPA specifically discourages proposals in the following areas:

- Evolutionary upgrades to existing technical capabilities that do not focus on URSA technology areas or address the URSA vision
- Monolithic, single platform/sensor solutions
- Machine vision-only solutions that exclusively exploit subject signatures and do not take behavior into account (e.g., upgrades to Automated Target Recognition or sensor fusion algorithms when used by themselves)
- Significant hardware development in relatively mature technology areas such as unmanned platforms, sensors, mission control equipment, heads up displays or another interface equipment
- Significant development of simulation engines, unmanned systems vehicle management and mission management software, or other software development not required to demonstrate URSA capabilities
- Significant development of autonomous sensor emplacement mechanisms or techniques
- Significant modification or development of digital communications, to include radios, waveforms, and networking technologies
- Significant development of lethal or nonlethal rounds, payloads, or effects and methods of delivery
- Systems or experimentation using live animals
- Interactions with humans that could result in potential injury

B. Program Plan

The URSA program is a two-phase, 36-month development effort. The URSA program is intended to be an aggressive effort focused on addressing the key risks associated with the URSA concept. Proposals should be scoped to provide innovative approaches that develop and evaluate new URSA autonomy technology and evaluate technical maturity of supporting technology without the effort required for a full system development. DARPA envisions rapid prototyping best practices, including significant hardware and software content re-use, in order to maximize leveraging of existing, proven systems.

Phase 1 will include initial technology research and trade studies to develop an evolutionary demonstration architecture and demonstration approach. The Phase 1 program will be comprised of two performer tracks. Track A will be focused on system-level solutions and demonstrations. Track B will be used to fund compelling critical enabling capabilities such as component-level

algorithms, behavioral analysis techniques, technologies or other unique research that could enhance multiple system level approaches. The objective of Track B is to enable participation by companies with niche expertise who can only offer partial solutions to URSA. Track B performer results will be due approximately 12 months after award to enable assessment and potential teaming with Track A performers for Phase 2. In Phase 2, one or more Track A performers will continue to enhance their system-level capabilities and migrate to an urban environment test site for field demonstrations.

The envisioned Program Schedule is provided in Figure 1. While the phasing structure is fixed, the specific schedule of events and demonstrations shown within Phase 1 is notional. Proposers should define the details of their program based on their unique approach and deliverables schedule.

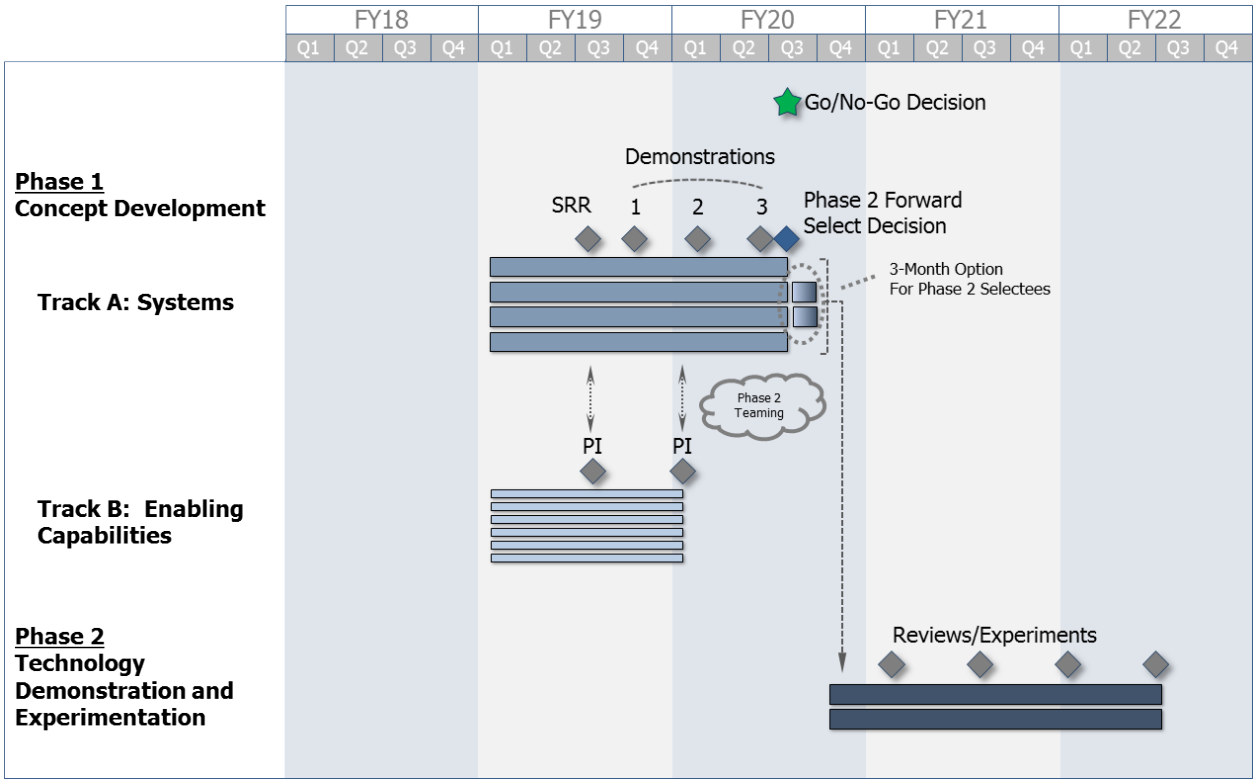


Figure 1. URSA Program Schedule

1. Program Acquisition Strategy

At this time, DARPA is soliciting full proposals for Phase 1 only. Proposers shall also provide an initial program plan, schedule, and ROM cost for Phase 2. Track A Phase 1 proposals shall be comprised of an 18-month base period and a 3-month option period. As described in II.C below, DARPA will conduct a go/no go review no later than 18 months after award to assess whether Phase 1 success metrics have been met by one or more Track A performers and whether the program warrants proceeding to Phase 2. The Phase 2 competition will be limited to only URSA Phase 1 Track A prime contractors. Updated proposal guidance for Phase 2 will be provided to Phase 1 performers toward the end of Phase 1. Upon selection of the Phase 2 performers, DARPA will exercise the 3-month Phase 1 options of the selected performers to mitigate risk of a gap in performance between Phases 1 and 2.

2. Track A and Track B Performer Collaboration

Track A performers are expected to collaborate with all Track B performers and consider the results of these efforts when developing their system-level solution and demonstration approach. The Government will host all performers for common, technical interchange meetings (TIMs) at six (6) months and 12 months after award. At these reviews, the Government expects Track B performers to brief results to all of the Track A performers, and Track A performers will share progress and insights with the Track B performers. In addition to open sessions, the Government will also arrange for break-out meeting room to enable collaborative meetings between Track A and B performers to facilitate teaming discussions.

3. Program Management and Government Collaboration

DARPA envisions close collaboration with the performers, particularly during the Phase 1 requirements development and trade study activities. DARPA will staff a team of subject matter experts from Government and support contractors in relevant technical areas, including behavioral science, CONOPS/rules of engagement, human use/ethics and other disciplines to assist in developing a robust URSA solution. This Government team will attend program reviews to provide feedback to the Program Manager. In addition to formal program reviews, DARPA will hold regular teleconferences to enhance communications and collaboration with the Government team.

4. Human Subjects Research (HSR)

DARPA anticipates that, at a minimum, Phase 2 will include field demonstrations with live participants. Proposers will determine whether HSR is required to support their program in Phase 1. Proposers must be prepared to comply with all relevant statutory HSR requirements and provide relevant information in the proposal. See Section IV.E below for proposal instructions.

5. Intellectual Property

DARPA recognizes that aspects of proposed re-used or off-the-shelf hardware and software may have proprietary restrictions. Due to the evolutionary nature of URSA and potential follow-on activities, DARPA desires at a minimum Government Purpose Rights to all of the hardware and software interfaces to enable future expansion and "plug and play" of alternative sensor or other data streams.

C. Program Metrics and Phase 2 Go/No-Go Decision

The ability to achieve sufficient accuracy and timeliness in discriminating human threats in a dense urban environment will be the key to whether this novel capability is technically feasible and can provide operational value to the warfighter. Therefore, DARPA has established a set of program metrics to assess progress toward addressing key risks in Phase 1 and performance goals to be achieved by the end of Phase 2. In Phase 1, it is expected that Track A performers will substantiate that they meet the Phase 1 metrics shown in Table 1 via a combination of analysis, simulation, and demonstration of key critical behaviors and hardware components. Track A performers must address how they have developed their personnel and scenario input data for the Phase 1 final demonstration and to ensure that the results are valid. Track B performers should show traceability to the appropriate metrics for their enabling capability.

Table 1. Phase 1 Metrics

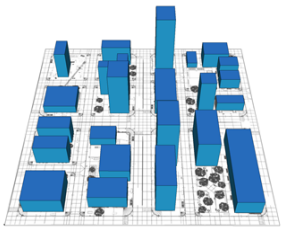
Task	Conditions	Metrics
Detect Hunter-Killer team • 4 people • 2 locations • Coordinated activity	• Evaluate in representative training sector: 5,000 m^2, 10 structures • Duration: 2 hours • Individuals: 20 combatants characterized by movement, appearance and intent; 20 noncombatants	• Detect and discriminate 12 of 20 threats, out of 40 presentations • Maximum 4 false threat detections • Demonstrate novel autonomous agents and techniques that can detect and discriminate threats with a true positive rate of 0.60 and false positive rate of 0.20
Test environment to be the equivalent of a simulation representation - ~5,000m^2 and ~10 urban structures (and corresponding dense urban corridors/pathways)		

For URSA Phase 1, DARPA envisions the Table 1 metrics could be applied to:

- The proposer's simulated environment (multiscale)
- A proposer's local "proving grounds" site for real-world characterizations and validations appropriate to their proposed effort, and
- DARPA notional test sites (representative, illustrative, and for proposal analysis/costing purposes only).

The specific demonstration approach for Phase 1 metrics is at the discretion of the proposer, depending on proposed schedule and budget. The Government reserves the right to provide an independent data set or interact independently with the final Phase 1 demonstration.

Point of departure examples for a simulated URSA environment (left) and DARPA Phase 1 notional test environment (right) are shown in Figure 2.



Plot area 200m x 200m	~40,000 m²
Ground Surface Area	~30,000 m²
Building Surface Area	~50,000 m²
Total Search Surface Area	~80,000 m²
Structure Count	~25

Plot area 200m x 200m	~5,000 m²
Ground Surface Area	~3,000 m²
Building Surface Area	~3,000 m²
Total Search Surface Area	~6,000 m²
Structure Count	~10

Figure 2. Environment Examples

At the end of Phase 1, DARPA will conduct a go/no-go review of the results of Phase 1 activities and demonstrations to assess whether:

- The performer has credibly demonstrated that their URSA solution can detect and discriminate threats and meet the metrics described in Table 1. The performer is responsible for providing the justification that their approach has adequate fidelity to substantiate their performance predictions.
- The performer has completed a System Requirements Review (see Section I.D.4.b) and URSA Development and Demonstration Plan (UDDP) that are credible for maturing URSA through Phase 2 and can result in a product with operational value to the Services
- The performer has developed a credible, executable Phase 2 program plan

This go/no-go review must convince DARPA that: (1) URSA is a feasible and effective option for discriminating threats from non-combatants in an urban environment; (2) the UDDP presents a feasible and affordable approach to reduce system risk within the program schedule and budget; and (3) continuation into Phase 2 is warranted.

A description of Phase 2 metrics and environments is provided in Table 2. These are initial metrics provided to assist the performer in scoping the envisioned complexity of the Phase 2 live demonstrations and ensure the demonstration architecture enables adequate expansion/capability enhancements to address Phase 2 objectives. In Phase 2, DARPA will assess the performance of the URSA technologies using a series of live field evaluation experiments with increasing threat complexity. The Phase 2 experiments will be run by DARPA. Progress will be measured against the program success metrics provided in Table 2. Details of Phase 2 live test scenarios and test site selection will be established during Phase 1 and included in the Phase 2 proposal request.

Table 2. Phase 2 Metrics

Task	Conditions	Metrics
Detect Sniper • 1-2 persons at a time • Multiple locations • Simultaneous activity	• Evaluate in representative urban neighborhood: 40,000 m^2, 25 structures • Duration: 2 hours • Personnel: 8 combatants, 32 noncombatants	• Detect and discriminate 6 of 8 threats (sequential and random over 2 hours) • Maximum 4 false threat detections
Detect Hunter-Killer team • 4 people • 2 locations • Coordinated activity	• Evaluate in representative urban neighborhood: 40,000 m^2, 25 structures • Duration: 3 hours • Personnel: 20 combatants, 20 noncombatants	• Detect and discriminate 16 of 20 threats (sequential and random over 3 hours) • Maximum 4 false threat detections
Test environment to be the equivalent of both a simulation and live representation - ~40,000m^2 and ~25 urban structures (and corresponding dense urban corridors/pathways)		

D. Phase 1 Objectives – Track A

The primary objectives of Phase 1 are to conduct trade studies, define functional capabilities necessary to develop an optimized URSA vision; mature elemental technologies, features and capabilities; and conduct initial system-level demonstrations. The final Phase 1 demonstration should substantiate the ability to meet URSA Phase 1 program metrics. In parallel, performers will continue to mature their Phase 2 plan.

DARPA has defined the term "URSA Integrated Testbed (UIT)" to describe the unique way that each performer will use simulation, software, and hardware to support URSA functionality and capability demonstrations. The UIT is not a monolithic demonstration system intended to have operational utility; rather, it is a flexible and evolutionary environment that can accelerate URSA development and be used to demonstrate and assess various URSA elemental and system-level capabilities. For example, a performer's UIT could include a 3D simulation of an urban space that can be populated by simulated or live agents representing U.S. forces, hostile actors and non-combatants. Such a UIT would accept data streams from multiple sources, run sensor fusion and data analytics algorithms, and incorporate other URSA attributes in sufficient detail to allow DARPA to assess the system's ability to meet program metrics. Each proposer should clearly define what constitutes their version of a UIT and how it supports the proposed technical approach.

Over the course of the program, performers will enhance the fidelity of their respective UIT, culminating in live experiments in an operationally representative environment. DARPA desires that each performer describe how their UIT will enable rapid increases in capability and incorporate results of emerging research. DARPA envisions that each performer's UIT will evolve as capabilities are matured, and may include simulation, software-in-the loop (SITL) features such as various levels of autonomy, and hardware-in-the-loop (HITL) functionality such as data collection from sensor assets. Performing live demonstrations by the end of Phase 1 is not required, but is a desirable end state. In any case, proposers will need to demonstrate a robust ability to perform field experiments in Phase 2.

The following paragraphs outline envisioned Phase 1 activities. Proposers are free to propose alternative program approaches that meet the same objectives.

1. URSA System Trade Studies and UIT Requirements Development

The performer shall implement a disciplined systems engineering process to ensure a robust and high value UIT solution. The performer shall conduct trade studies and analyses to characterize elemental capabilities and develop UIT functional requirements traceable to their overall URSA vision and the Phase 1 success metrics. The performer should ensure that the UIT has adequate functionality to explore the key questions in Section II.A. It is expected that these trade studies will explore areas including, but not limited to:

- Alternative stimulating actions, potential effects and what can be measured/discriminated
- Identification and assessment of candidate dimensions of evidence and their correlation to human intent
- Effectiveness of various sensor modalities, platform/sensor combinations and integration of data streams
- Candidate unmanned platforms to assist in data gathering

- Data analysis techniques for iteratively fusing and assessing data from multiple sources
- Behavior-based analysis approach and decision engines
- Algorithm functionality/levels of autonomy
- Human Machine Interface (HMI)/mission control approach
- Operational feasibility/value of UIT functionality and capability demonstrations

The results of these activities will provide the performer and DARPA with significant insights into the URSA trade space and ensure a high value UIT design.

The performer shall conduct system-level analysis of the predicted performance of their URSA technical approach and architecture against the URSA program metrics and demonstration objectives to derive a full set of system architecture requirements that maximize UIT utility. In parallel, the performer shall conduct design trade studies to assess the feasibility, technical complexity, development risk, transition potential, and affordability of alternative UIT approaches in meeting these requirements.

As described in Section D above, DARPA believes that the UIT is a largely software-based, performer-defined entity that will evolve over time. Therefore, rather than a traditional hardware development paradigm, DARPA envisions a software-centric development approach like Agile development. This approach will be well suited to evolve the UIT over time, migrating from an initial pure simulation instantiation to progressively more complex software-in-the-loop and hardware-in-the-loop instantiations. The UIT should have the flexibility and adaptability to fully explore the URSA capability and functionality trade space and to assess the level of autonomy and opportunities/need for human interaction. It is envisioned that initial instantiations will include a human in the loop as part of the sensor fusion and supervisory control and that the level of human contribution will evolve as the UIT matures and the level of autonomy increases.

Leveraging of promising emerging tools and development models with extensible software architectures implemented in a game-like environment based on open source and/or industry-standard engines should be fully considered. Notional examples:

- Unreal and Unity style game engine environments
- Gazebo physics-based development environment originally used for unmanned/manned system performance development and visualization
- Robot Operating System (ROS) and equivalent sets of software libraries and tools to rapidly develop complex and highly capable software-hardware systems.

These environments and libraries allow a UIT to offer realistic, virtual development “worlds” where dense urban and other relevant operational environments can be utilized, scaled, and expanded. Importantly, a UIT environment must stress verticality, primarily driven by building height (and associated features – windows, balconies, overhangs, lighting effects, UxV obstacles), of the dense urban environment that is difficult to replicate or experience in real training sites. Miniaturized computing and a large consumer device market have spawned a wave of highly accessible and highly capable voice and touch-based interface modalities. A variety of open and Government-owned standards exist or are emerging to support common interfaces with diverse systems (e.g., relevant Standardization Agreements (STANAGs), Cursor-on-Target (COT), Unmanned Aircraft System/UAS C2 Initiative (UCI), or UAS Control Segment (UCS)), and compliant interfaces may be useful for future URSA extensibility. Government-owned systems such as the Android Tactical Assault Kit (ATAK) provide robust map engines and application

development kits. Wherever reasonable and prudent, the Government desires to leverage free, open-source, or open-standard software elements to maximize the value of URSA development investment.

2. URSA Development and Demonstration Plan (UDDP)

The performer shall refine and add details to the UDDP provided in the proposal. The UDDP will define the team's overall approach to mitigating risk and maturing their UIT. The UDDP should also describe the approach to behavioral analysis and evidence accumulation, including the approach for periodically incorporating results from emerging research in human behavior and intent. The UDDP should define the risk reduction, technology maturation, algorithm and process development maturation, and evolutionary UIT functionality and associated demonstration activities that will be conducted to validate the ability to achieve URSA program objectives. The UDDP will provide an integrated basis for all development and demonstration activities and detail the full progression of UIT instantiations envisioned to achieve the final Phase 2 objective of live demonstration at an operationally representative test site. The success metrics described in the Program Plan are a minimum set of demonstration objectives for each phase. It is expected that performers will conduct additional demonstration events no less frequently than at six-month intervals throughout the program to demonstrate the maturation of their UIT. The plan should describe the objectives and system-level maturity expected at each demonstration event and the type/fidelity of the demonstration (e.g., software simulation, hardware in the loop simulation, live test). The plan shall also include a complete UIT demonstration schedule as well as Phase 2 ROM cost. The UDDP will be finalized by the first quarterly review. The UDDP and Phase 2 program plan will be updated quarterly throughout Phase 1.

3. Phase 1 UIT Development, Risk Reduction and Demonstrations

The performer shall conduct UIT simulation engine trades/selection, development, risk reduction and demonstration activities to achieve Phase 1 program objectives. The performer will mature the Phase 1 UIT instantiation and functionality as well as an appropriate set of enabling capabilities, including component-level algorithms, technologies or other unique research to achieve Phase I demonstrations and metrics. DARPA envisions that performers may also conduct initial data gathering in Phase 1 to assist in populating their UIT Phase 1 instantiation. DARPA desires at a minimum a robust simulation and analysis-based demonstration to meet the Phase 1 success metrics. Proposers who exceed the baseline level of fidelity, e.g., include hardware- or software-in-the-loop simulation for substantial elements of the architecture, will be viewed more favorably. In Phase 1, performers are expected to develop the input data that will be used in demonstrations and to assess the Phase 1 metrics. Performers must substantiate that their input data set(s) adequately represent an urban population of threats and non-combatants. Supporting analysis should substantiate and validate assumptions related to analysis of the identified dimensions of evidence and their correlation to human intent. The Phase 1 UIT evolutionary development and demonstrations should show a clear path to the Phase 2 demonstrations.

During Phase 1, DARPA envisions that UIT demonstrations will be conducted at a performer facility. If a proposer desires to conduct Phase 1 testing at a Government facility, the proposer must include this cost as part of their proposal in accordance with the proposal instructions in Section IV.2 below. For budgetary purposes, the cost of the Phase 1 Government furnished facility will be counted towards the total Phase 1 performer cost. Upon award, if more cost-effective, DARPA may elect to fund the Government test entity directly.

4. Phase 1 Reviews and Deliverables

DARPA will host a kick-off meeting within one (1) month of contract award. DARPA desires that the program include quarterly program reviews. For proposal purposes, proposers should assume that DARPA will host the kickoff meeting, the 6-month and the 12-month program reviews in Arlington, Virginia. All other quarterly reviews will be held at the performer's facility or by teleconference. The objective of these reviews will be to assess progress, provide feedback and stay abreast of any emerging technical, cost, or schedule issues. To successfully achieve the Phase 1 objectives and to ensure consistency among performers, DARPA has developed a minimum list of events and deliverables that must be included in the proposer's Phase 1 program. Each of these minimum events and deliverables is described below. Proposers should populate their program schedule with these minimum deliverables and supplement this list with additional deliverables/material to be presented at each quarterly review in accordance with their unique program schedule and development approach. System architecture and design updates, technical status, schedule and execution status, and results of any risk reduction/UIT demonstrations shall be provided at each quarterly review. Each review will also include an analysis of current system-level performance and progress towards achieving Phase 1 and Phase 2 metrics.

As described in Section II.B.2 above, the 6-month and 12-month reviews will also include collaborative discussions with Track B performers. The Government plans to host individual sessions with each Track A performer as well as group sessions with Track B performers. Additional guidance regarding the format and schedule of these reviews will be provided after award.

a) Kick-off Meeting

The objective of this meeting will be to discuss the performer's approach to the program and provide feedback to guide the performer in executing their Phase 1 program. The Government and the performer will also establish the program review schedule as well a schedule of interim informal interactions, including routine management and technical telecoms.

b) UIT System Requirements Review

The objective of this meeting will be to review the performer's optimized UIT system engine and system architecture and development approach. It is expected that this review will detail the design trades and analyses conducted to define the performer's UIT simulation engine selection, architecture design, system and functional requirements, and UDDP. The review should also detail the dimensions of evidence to be assessed in the UIT, including, but not limited to, personnel signatures and behavioral modalities, with evidence to support their correlation to identifying hostile/non-hostile intent. The review should fully describe the planned instantiations of UIT. This review should fully detail the proposed UIT system capabilities, functions and interfaces at each instantiation and show how these trace to Phase 1 and Phase 2 performance and capability objectives as well as the overall URSA vision. The performer shall show how they will maintain requirements traceability at each instantiation of the UIT. Performers shall discuss their approach for modeling the test environment, generating input data sets and validating demonstration results for each instantiation of the UIT. Key interfaces should be defined and described. Finally, this review shall provide the roadmap for maturing the capability and fully describe the Phase 1 UIT demonstration plans. This includes describing the initial UIT instantiation as well as any additional Phase 1 instantiations.

c) Phase 1 Risk Reduction and UIT Demonstrations

Performers should demonstrate capability and functionality of the UIT at periodic major UIT demonstration events. Each proposer should define the optimal frequency and timing of these events in their Phase 1 proposal based on the progress and maturity of their UIT as described within their UDDP. Performers shall provide monthly updates on UIT development progress as part of the teleconference schedule Performers may also conduct parallel risk reduction activities to validate enabling capabilities. The performer will document the results of all Phase 1 risk reduction and UIT demonstrations. Results should be presented at quarterly reviews and include an assessment of performance with relation to the URSA system level objectives and Phase 1 and 2 metrics. The proposer should identify the UIT hardware and software deliverables to be provided at the completion of Phase 1 as appropriate for their proposed UIT.

d) UDDP Quarterly Updates

The performer will provide a final Phase 1 UDDP not later than the first quarterly review based on feedback and discussions with the Government at the kickoff meeting. Subsequently, the performer will update their UDDP to reflect emerging Phase 1 results and add additional details as the Phase 2 program plan matures and a Phase 2 test site is identified.

e) Phase 2 Program Plan Quarterly Updates

The performer will update Phase 2 program plan, including additional detail regarding the functionality, content and objectives of planned Phase 2 demonstrations, cost and schedule information. These updates should be briefed at quarterly design reviews.

E. Phase 2 Objectives – Track A

As described in the Program Plan, DARPA intends to request proposals for Phase 2 prior to the completion of Phase 1. DARPA plans to provide updated Phase 2 objectives with the proposal request that reflects lessons learned from the Phase 1 program and to provide further guidance regarding UIT demonstrations, test facilities, deliverables, etc. Evaluation of the Phase 2 proposal will be based on criteria to be further defined in the proposal request. These criteria will be consistent with the evaluation criteria in this BAA, but tailored to the Phase 2 proposal content.

The objective of Phase 2 is to continue progressive capability build-up of UIT demonstrations including SITL, HITL, and field demonstrations. The details of the Phase 2 plan and demonstrations will be defined by the proposer based on their unique UIT development and demonstration plan. DARPA desires a final Phase 2 demonstration that not only substantiates the ability to meet the Phase 2 metrics, but that is also compelling to potential users and transition partners.

In Phase 2, UIT live field demos will be conducted at a Government-furnished, operationally representative urban test facility, such as Muscatatuck Urban Training Center or the Marine Corps Air-Ground Combat Center (MCAGCC) Twentynine Palms (Ranges 200, 215 and 220). Performers should identify additional candidate sites for consideration. During Phase 1, DARPA will assess and select the Phase 2 test site.

F. Phase 1 Objectives – Track B

The objective of Track B is to develop and mature critical enabling capabilities to support URSA system-level approaches. Track B performers should mature the critical enabling capability to a level that supports incorporation into a Track A system at the end of the Track B effort. Maturation

approaches may include simulation, SITL/HITL testing, laboratory experiments, and/or other relevant demonstrations.

DARPA strongly encourages the Track B proposers to achieve the highest level of maturity for their capability possible by Month 12, as well as to develop a plan for how their capability could be integrated into a system-level approach. Incorporation of Track B efforts into Track A efforts is at the discretion of the Track A performers. Working prototypes, models, or test data are highly encouraged to substantiate the value of the Track B effort to the Track A performers.

DARPA desires that the program include quarterly program reviews. For proposal purposes, proposers should assume that DARPA will host the kickoff meeting, the 6-month and the 12-month program reviews in Arlington, Virginia. The 9-month quarterly review will be held at the performer's facility. The objective of these reviews will be to assess progress, provide feedback and stay abreast of any emerging technical, cost, or schedule issues.

Close collaboration between the Track A and Track B performers will be critical to the program. As described in Section II.B.2 above, Track B performers will be requested to present at Technical Interchange Meetings (TIM) hosted by DARPA six (6) months and 12 months after award. Programmatic aspects of the program will be reviewed in private meetings with only the Government team in attendance.

II. Award Information

A. General Award Information

Multiple awards are anticipated for a total Phase 1 budget of $22.6M. DARPA envisions three to four Track A performers and multiple Track B performers. The amount of resources made available under this BAA will depend on the quality of the proposals received and the availability of funds.

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

The Government reserves the right to request any additional, necessary documentation once it makes the award instrument determination. Such additional information may include but is not limited to Representations and Certifications (see Section VI.B.2, "Representations and Certifications"). The Government reserves the right to remove proposals from award consideration, should the parties fail to reach agreement on award terms, conditions, and/or cost/price within a reasonable time, or the proposer fails to provide requested additional information in a timely manner. Proposals identified for negotiation may result in a procurement contract or other transaction for prototype, depending upon the nature of the work proposed, the required degree of interaction between parties, whether or not the research is classified as Fundamental Research, and other factors.

Proposers looking for innovative, commercial-like contractual arrangements are encouraged to consider requesting Other Transactions. To understand the flexibility and options associated with Other Transactions, consult http://www.darpa.mil/work-with-us/contract-management#OtherTransactions.
In all cases, the Government contracting officer shall have sole discretion to select award instrument type, regardless of instrument type proposed, and to negotiate all instrument terms and conditions with selectees. DARPA will apply publication or other restrictions, as necessary, if it determines that the research resulting from the proposed effort will present a high likelihood of disclosing performance characteristics of military systems or manufacturing technologies that are unique and critical to defense. Any award resulting from such a determination will include a requirement for DARPA permission before publishing any information or results on the program. For more information on publication restrictions, see the section below on Fundamental Research.

B. Fundamental Research

It is DoD policy that the publication of products of fundamental research will remain unrestricted to the maximum extent possible. National Security Decision Directive (NSDD) 189 defines fundamental research as follows:

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

As of the date of publication of this BAA, the Government expects that program goals as described herein may be met by proposers intending to perform fundamental research and proposers not intending to perform fundamental research or the proposed research may present a high likelihood of disclosing performance characteristics of military systems or manufacturing technologies that are unique and critical to defense. Based on the nature of the performer and the nature of the work, the Government anticipates that some awards will include restrictions on the resultant research that will require the awardee to seek DARPA permission before publishing any information or results relative to the program.

Proposers should indicate in their proposal whether they believe the scope of the research included in their proposal is fundamental or not. While proposers should clearly explain the intended results of their research, the Government shall have sole discretion to select award instrument type and to negotiate all instrument terms and conditions with selectees. Appropriate clauses will be included in resultant awards for non-fundamental research to prescribe publication requirements and other restrictions, as appropriate. This clause can be found at http://www.darpa.mil/work-with-us/additional-baa.

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

III. Eligibility Information

A. Eligible Applicants

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

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

a) FFRDCs

FFRDCs are subject to applicable direct competition limitations and cannot propose to this BAA in any capacity unless they meet the following conditions: (1) FFRDCs must clearly demonstrate that the proposed work is not otherwise available from the private sector. (2) FFRDCs must provide a letter on official letterhead from their sponsoring organization citing the specific authority establishing their eligibility to propose to Government solicitations and compete with industry, and their compliance with the associated FFRDC sponsor agreement's terms and conditions. This information is required for FFRDCs proposing to be awardees or subawardees. All proposers are expected to address transition; transition is part of the evaluation criteria in Sections V.A and V.B. However, given their special status, FFRDCs should describe how and when a proposed technology/system will transition to which Non-FFRDC organization(s).

1. Government Entities

Government Entities (e.g., Government/National laboratories, military educational institutions, etc.) are subject to applicable direct competition limitations. Government entities must clearly demonstrate that the work is not otherwise available from the private sector and provide written documentation citing the specific statutory authority and contractual authority, if relevant, establishing their ability to propose to Government solicitations.

a) Authority and Eligibility

At the present time, DARPA does not consider 15 U.S.C. § 3710a to be sufficient legal authority to show eligibility. While 10 U.S.C.§ 2539b may be the appropriate statutory starting point for some entities, specific supporting regulatory guidance, together with evidence of agency approval, will still be required to fully establish eligibility. DARPA will consider FFRDC and Government entity eligibility submissions on a case-by-case basis; however, the burden to prove eligibility for all team members rests solely with the proposer.

(1) Non-U.S. organizations and/or individuals may participate to the extent that such participants comply with any necessary nondisclosure agreements, security regulations, export control laws, and other governing statutes applicable under the circumstances.

(2) For classified proposals, applicants will ensure all industrial, personnel, and information systems processing security requirements are in place and at the appropriate level (e.g., Facility Clearance Level (FCL), Automated Information Security (AIS), Certification and Accreditation (C&A), and any Foreign Ownership Control and Influence

(FOCI) issues are mitigated prior to submission. Additional information on these subjects can be found at http://www.dss.mil.

B. Organizational Conflicts of Interest

FAR 9.5 Requirements

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

Agency Supplemental OCI Policy

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

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

- The name of the DARPA office receiving the support;
- The prime contract number;
- Identification of proposed team member (subawardee, consultant) providing the support; and
- An OCI mitigation plan in accordance with FAR 9.5.

Government Procedures

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

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

If the Government determines that a proposer failed to fully disclose an OCI; or failed to provide the affirmation of DARPA support as described above; or failed to reasonably provide additional

information requested by the Government to assist in evaluating the proposer's OCI mitigation plan, the Government may reject the proposal and withdraw it from consideration for award.

C. Cost Sharing/Matching

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

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

IV. Application and Submission Information

A. Address to Request Application Package

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

B. General Format Guidance

All submissions, including abstracts and proposals must be written in English with type not smaller than 12-point font. Smaller font may be used for figures, tables, and charts but must be at least 8-point font. Page count limitations are described in Sections C and D below. A page is defined as material that can be printed on an 8 ½ x 11-inch piece of paper. Foldouts or other non-conforming page sizes will be counted as the number of equivalent printed pages. Abstracts or proposals exceeding the page count or not employing the specified formats may not be reviewed. Electronic copies of the proposals shall be provided in a searchable PDF format. Proposers are encouraged to provide source documents to facilitate extraction of graphics and tables to support proposal evaluation.

Proposers are strongly encouraged to submit an abstract in advance of a proposal. Full proposals shall consist of two volumes: 1) Volume I, Technical and Management Proposal and 2) Volume II, Cost Proposal.

C. Abstract Content and Format – Track A

Abstracts should provide a preliminary overview of the proposer's planned approach for URSA. Areas to be addressed should include:

- Key elements of the envisioned technical approach including approach to evidence accumulation and highlighting novel technologies, algorithms or other capabilities that enable the URSA vision
- Preliminary thoughts on a UIT concept and development approach and how that relates to URSA program vision and objectives
- UIT test and validation approach for assessing the Phase 1 and Phase 2 metrics
- Relevant qualifications and experience of the proposer and potential teaming partners
- Top level schedule for Phases 1 and 2, including System Requirements Review (SRR) and envisioned UIT functionality at each demonstration event.

The total abstract length shall not exceed five (5) pages. The maximum page count excludes the cover page, transmittal letter and any other front matter but does include any figures, tables, and charts. An official transmittal letter is not required.

D. Abstract Content and Format – Track B

Abstracts should provide a preliminary overview of the proposer's critical enabling capability for URSA. Areas to be addressed should include:

- Key features of the envisioned capability and how it will enable the URSA vision
- Envisioned ability to integrate with a system level UIT effort
- Traceability of how envisioned capability relates to achieving Phase 1 and Phase 2 program metrics
- Relevant qualifications and experience of the proposer and potential teaming partners
- Top-level schedule for Phase 1, including key maturation accomplished at each quarterly review and final deliverable

The total abstract length shall not exceed three (3) pages. The maximum page count excludes the cover page, transmittal letter and any other front matter but does include any figures, tables, and charts. An official transmittal letter is not required.

E. Volume I, Technical and Management Proposal Content and Format – Track A

The maximum page limit for Volume I is 45 pages. Bracketed numbers after each section heading denote recommended page limits. Proposers should ensure that each section provides the detailed discussion of the proposed work necessary to enable an in-depth review of the specific technical and managerial issues. Specific attention must be given to addressing both risk and payoff of the proposed work that make it desirable to DARPA.

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

1. Section 1. Administrative {no page limit}

a) Cover Sheet to include:

(1) BAA number (HR001118S0036);
(2) Lead Organization submitting proposal;
(3) Type of organization, selected among the following categories: "LARGE BUSINESS," "SMALL DISADVANTAGED BUSINESS," "OTHER SMALL BUSINESS," "HBCU," "MI," "OTHER EDUCATIONAL," OR "OTHER NONPROFIT";
(4) Proposer's reference number (if any);
(5) Other team members (if applicable) and type of organization for each;
(6) Proposal title;
(7) Technical track;
(8) Technical point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available), electronic mail (if available);
(9) Administrative point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available), electronic mail (if available);

(10) Award instrument requested: cost-plus-fixed-fee (CPFF), cost-contract—no fee, cost sharing contract – no fee, or other type of procurement contract (specify), or other transaction for prototype;
(11) Place(s) and period(s) of performance;
(12) Summary of the costs of the proposed research, including total base cost, estimates of base cost in each year of the effort, estimates of itemized options in each year of the effort, and cost sharing if relevant;
(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) DUNS number;
(16) TIN number;
(17) Cage Code;
(18) Proposal validity period (minimum 180 days).
(19) Date proposal was submitted.

(b) Official transmittal letter

(c) Table of contents, list of figures, list of acronyms, compliance matrix or any other standard front matter

2. Section 2. Technical Details

a) Executive Summary {5}:

This section should provide an executive-level description of key elements and unique features of the proposed URSA program. The executive summary shall address the proposer's overall URSA program technical approach and vision, initial UIT concept and novel features, initial URSA development and demonstration plan including a top-level schedule and envisioned test approach, and any other summary information that outlines the proposer's overall vision and approach to executing the full URSA program through the Phase 2 demonstrations.

b) Overall Program Approach {5}

The proposer shall describe their top-level vision for a future URSA operational capability, including functionality, CONOPS, military utility and operational feasibility. This section shall discuss why and how their proposed URSA approach will enable this future vision. This discussion should focus on the overall approach and how this reflects an understanding of how to effectively and efficiently achieve URSA program objectives rather than a specific design. This section should highlight key elements of the proposed approach along with key technical challenges. The proposer should discuss their approach in the context of a specific example, such as the one provided in Section I, to demonstrate their ability to synthesize an end-to-end solution. The proposer shall present substantiating data or analysis that indicates the potential feasibility and effectiveness of their conceptual approach. The proposer shall describe the relevance of their proposed URSA program to the DARPA mission. This discussion should describe the proposer's vision for how their proposed program will lead to a robust capability with operational value to the Services.

c) Program Team {5, excluding resumes}

This section shall describe the structure and integration of the proposed team to cover the various breadth of URSA program domains. The proposer shall discuss its ability to execute technically challenging, heavily software-oriented programs on time and within budget as demonstrated by the team's corporate experience and key personnel performance on relevant past programs. The proposer shall describe proposed teammates, their competencies, and proposed role. The proposer should provide evidence that their team has adequate strength and appropriate focus on critical competencies required for successful URSA execution. The proposer shall provide resumes and qualifications of key personnel, including the proposed Program Manager, Chief Engineer, Chief Systems Engineer, Software Development Lead, and System Integration and Test Lead (or equivalent based on the proposer's management terminology), as well as other functional area leads as defined by the proposer's team organization. Resumes are limited to three (3) pages each and do not count against the page count. This section shall describe the role on the program, along with the percentage time commitment of each of these key personnel. DARPA requires key personnel identified in the proposal to be assigned as proposed, and the resulting contract/agreement will indicate no substitution shall be made without prior approval of the Government.

d) Initial UIT Concept and Architecture {10}:

The proposer shall provide their top-level concept for the UIT. This description is intended to be the proposer's initial thoughts on their UIT architecture that will evolve based on the Phase 1 activities. In particular, this description should address the envisioned system integration and data collection approach, including threat and noncombatant modeling/representation, that will provide meaningful data for validating system capabilities and allow exploration of the URSA trade space. The proposer should describe their approach to behavioral analysis and evidence accumulation. The proposer should describe their overall technical approach, including their trade study and analysis plan for developing the URSA system architecture, initial URSA instances, and finalizing their UDDP. The proposal should describe the systems engineering process to develop UIT system requirements that are traceable to the Phase 1 and 2 metrics and programmatic objectives as well as to a future transitionable capability. The proposer should also address how they will develop interfaces, track configuration, and their overall development process. Finally, this section should include a discussion of the development tools the proposer plans to use and their experience using those tools to address relevant problems.

e) Initial UDDP {12}

The proposer shall provide an initial UDDP, providing point-of-departure ideas for achieving a compelling progression of URSA functionality and demonstrations within the available budget and schedule objectives. The proposer shall describe how their overall UIT test approach evolves as the UIT progresses from simulation to software-in-the-loop to hardware-in-the-loop to live testing. The proposer shall describe their approach to decomposing the system-level metrics into component-level/technical metrics and associate those with functional capabilities for UIT instantiations and how the proposer will assess performance against the Phase 1 and Phase 2 metrics. The proposer will also describe the data sources and specific approach for validating metrics in Phase 1. This discussion shall describe major demonstration events and proposed functionality at each event to illustrate how the proposed progression will accomplish the minimum specified Phase 1 and Phase 2 objectives and achieve the URSA program vision. This

initial plan shall include a detailed description of Phase 1 risk reduction activities and UIT demonstrations, including purpose, functionality to be demonstrated, success metrics, and assessment approach. The proposer shall include a master demonstration schedule that shows the full scope of program risk reduction activities and UIT demonstrations in Phases 1 and 2. It is envisioned that this section will include a higher level of detail on Phase 1 activities than Phase 2 activities.

f) Phase 1 Program Plan {5}

The proposer shall provide a detailed discussion of their proposed management approach for successfully accomplishing Phase 1 objectives, deliverables and success metrics. The proposer shall describe their proposed approach to interacting with, assessing, and integrating the results of Track B performers. The management plan shall also include the proposed programmatic approach to cost, schedule, and risk management. Although formal earned value management (EVM) is not required, the proposer must meet the intent and describe how they will provide ongoing assessment of technical and programmatic progress against the program plan, critical path, schedule and cost. This discussion shall detail the proposed approach to software re-use and software development management and tracking. The proposer shall address its program control approach to include method, content, and frequency of cost performance reporting as well as the approach for conducting variance analyses, developing corrective action plans, and assessing the impact on estimates to complete. The proposer shall also describe their proposed approach to subcontractor management, quality control, safety, and security.

The proposer shall describe their proposed level of Government interaction to facilitate efficient interactions and streamlined decision making. The proposer shall describe how activities will be managed and integrated across geographically and/or organizationally separate team elements. The proposer shall define the content of technical and financial progress reports that enables efficient program monitoring, tracking, and reporting. Program management tools should be the same tools used internally to manage the program. No additional unique information for the Government is desired or required.

g) Phase 1 Statement of Work (SOW) {not included in page count}

The SOW should clearly define the technical tasks/subtasks to be performed in Phase 1. For each task/subtask, the SOW should include:

- A general description of the objective (for each defined task/activity);
- A detailed description of the approach to be taken to accomplish each defined task/activity;
- Identification of the primary organization responsible for task execution (prime, subcontractor, by name, etc.);
- The completion criteria for each task/activity, such as a product, event, or milestone that defines its completion; and
- A definition of all deliverables (reports, data, software, documentation, hardware, demonstration system element, multimedia, etc.) to be provided to the Government in support of the proposed research tasks/activities. Include expected delivery date for each deliverable.

The proposer shall include an 18-month base period SOW and a 3-month option SOW. The 3-month optional tasks shall be separate from the base proposal tasks. DARPA expects that the level of effort to be performed during the 3-month option period will be similar to the expenditure rate

during the final months of the base period. If the proposer includes HSR work in Phase 1, these activities shall be included as separate WBS elements so they may be contracted as separate contract line items (CLINs).

The proposer shall employ a common work breakdown structure (WBS) for numbering all activities in the SOW, IMS, and cost proposal. This WBS should be fully populated to a low enough level such that individual task elements can be adequately assessed. The intent is to allow the Government sufficient visibility into the task element content and schedule to assess critical path, execution risk and cost realism. During program execution, this level of visibility will be crucial for assessing program progress and managing the critical path. It is envisioned that major hardware and software component development and test activities will be detailed to Level 4 or below such that there is a direct correlation between material purchases and individual items, insight into the level of effort associated with individual UIT instance builds and demos, understanding of individual test composition and cost, etc. Lower levels of detail are acceptable for level-of-effort type tasks such as program management, program control, etc.

Do not include any proprietary information in the SOW or include any markings placing limitations on distribution on the pages containing the SOW.

h) Integrated Master Schedule (IMS) {not included in page count}

The IMS shall detail the specific tasks to be accomplished, their interrelationship, and time sequencing. The IMS should be provided at the same or lower level WBS as the SOW. The IMS will include a critical path analysis (CPA) that addresses all major events leading up to and including the final Phase 1 demonstration. Details will be provided on critical activities such as software development, fabrication and integration, and risk reduction. This analysis will assess the key processes, developments or activities that will pace the development schedule. The IMS will be developed in a program management tool to a level of detail sufficient for the Government to make an independent analysis during proposal review and to implement CPA throughout the URSA program.

i) Initial Phase 2 Program Plan {3}

The proposer shall also provide an initial program plan, schedule, and ROM cost for Phase 2. The Government is not expecting a detailed plan for Phase 2, but rather seeks confidence that the proposer understands the major technical hurdles and has a top-level approach to achieving URSA live demonstration on a Government urban test range populated with Government-provided personnel. This preliminary Phase 2 information should also substantiate that the proposer understands the full scope of the program objectives and can reasonably expect to complete the overall program through Phase 2 within budget and schedule.

j) Human Subjects Research Approach {excluded from page count}

DARPA anticipates that no later than Phase 2, all efforts will require the performer to conduct periodic human subjects testing as part of evaluating URSA UIT capabilities and user interfaces. If a proposer plans to include human subjects testing in Phase 1, the proposal shall include evidence of a fully drafted protocol along with a plan for submission and review by an Institutional Review Board (IRB). Separate protocols may be required for internal testing of system prototypes with a civilian population and experimental evaluation of system prototypes with a military population. This paperwork will not count against the page limits established for the proposal.

k) Government Furnished Material {excluded from page count}

The proposer shall identify any required Government-furnished facilities, equipment, data, manpower, additional facility improvements over existing facility capabilities, and equipment to support the proposer's Phase 1 UIT development and demonstration approach. This list should include rationale, ROM cost and dates needed. Cost of any Phase 1 GFE will count against the total Phase 1 funding available.

l) Intellectual Property {excluded from page count}

The proposal shall include a discussion of the proposed data rights approach for the entire program, including with regard to delivered assets at the conclusion of Phase 2. Due to the Government's desire to transition URSA technologies for a range of potential applications, the Government desires a maximally open architecture with no proprietary interfaces. If the proposer intends to assert proprietary claims, they must provide rationale for this claim (e.g., potential commercial follow-on applications or use of Section 845), describe why it is in the best interest of the Government, and describe why it will not hamper the transition potential for URSA. Per Section IV.H.8 below, proposers responding to this BAA must submit a separate list of all technical data or computer software that will be furnished to the Government with other than unlimited rights. The Government will assume unlimited rights if proposers fail to identify any intellectual property restrictions in their proposals. Include in this section all proprietary claims to results, demonstration systems, deliverables or systems supporting and/or necessary for the use of the research, results, demonstration systems and/or deliverables. If no restrictions are intended, then the proposer should state "NONE".

F. Volume I, Technical and Management Proposal Content and Format – Track B

The maximum page limit for Volume I is 20 pages. Bracketed numbers before each section denote recommended page limits. Proposers should ensure that each section provides the detailed discussion of the proposed work necessary to enable an in-depth review of the specific technical and managerial issues. Specific attention must be given to addressing both risk and payoff of the proposed work that make it desirable to DARPA.

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

1. Section 1. Administrative {no page limit}

a) Cover Sheet to include:

(1) BAA number (HR001118S0036);
(2) Lead Organization submitting proposal;
(3) Type of organization, selected among the following categories: "LARGE BUSINESS," "SMALL DISADVANTAGED BUSINESS," "OTHER SMALL BUSINESS," "HBCU," "MI," "OTHER EDUCATIONAL," OR "OTHER NONPROFIT";
(4) Proposer's reference number (if any);
(5) Other team members (if applicable) and type of organization for each;
(6) Proposal title;
(7) Technical track;

(8) Technical point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available), electronic mail (if available);
(9) Administrative point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available), electronic mail (if available);
(10) Award instrument requested: cost-plus-fixed-free (CPFF), cost-contract—no fee, cost sharing contract – no fee, or other type of procurement contract (specify), or other transaction for prototype;
(11) Place(s) and period(s) of performance;
(12) Summary of the costs of the proposed research, including total base cost, estimates of base cost in each year of the effort, estimates of itemized options in each year of the effort, and cost sharing if relevant;
(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) DUNS number;
(16) TIN number;
(17) Cage Code;
(18) Proposal validity period (minimum 180 days).
(19) Date proposal was submitted.

(b) Official transmittal letter

(c) Table of contents, list of figures, list of acronyms, compliance matrix or any other standard front matter

2. Section 2. Technical Details

a) Executive Summary {2}:

This section should provide an executive-level description of key elements and novel features of the proposed URSA enabling capability. The executive summary shall address how the proposed capability will enhance the overall URSA program and vision, including a top-level schedule of proposed Phase 1 maturation activities. This section should also describe how the envisioned Phase 1 products will have adequate maturity to enable integration into a Track A system level effort.

b) Proposed Enabling Capability {10}

The proposer shall provide a description of their proposed enabling capability and its potential payoff in achieving the URSA vision. This description is intended to be the proposer's initial concept that will evolve based on the Phase 1 activities. This section should highlight key elements of the proposed approach along with key technical challenges. The proposer shall present any substantiating data or analysis that indicates the potential feasibility and effectiveness of their proposed enabling capability. The proposer should also relate this analysis to the extent possible to the URSA program success metrics. The proposer shall describe the relevance of their proposed capability to an URSA system-level effort and their vision for how their Phase 1 final products can be integrated into a Track A effort. This discussion should address the envisioned maturity achievable, including meaningful data and deliverables that will result in high likelihood of being adopted by a Track A performer.

c) Program Team {3, excluding resumes}

This section shall describe the structure and integration of the proposed team to perform the Phase 1 effort. The proposer shall discuss its ability to execute programs of similar content and complexity on time and within budget as demonstrated by the team's corporate experience and key personnel performance on relevant past programs. The proposer shall describe proposed teammates, their competencies, and proposed role. The proposer shall provide resumes and qualifications of key personnel including the proposed Program Manager and any functional area leads as defined by the proposer's team organization. This section shall describe the role on the program, along with the percentage time commitment of each of these key personnel. Key personnel should have adequate experience from past programs that is relevant to their proposed role on this program. DARPA requires key personnel identified in the proposal to be assigned as proposed, and the resulting contract/agreement will indicate no substitution shall be made without prior approval of the Government.

d) Phase 1 Program Plan {5}

The proposer shall provide their plan for maturing their enabling capability during Phase 1 and developing final products within the proposed budget and schedule. The proposer shall describe their major development and risk reduction events, including planned progress to be accomplished at each quarterly review, culminating in the final Phase 1 products.

The proposer shall provide a detailed discussion of their proposed management approach for successfully accomplishing Phase 1 objectives and deliverables. The proposer shall describe their proposed approach to interacting and sharing results with Track A performers to ensure they can inform and enhance the Track A efforts.

The management plan shall also include the proposed programmatic approach to cost, schedule, and risk management. The proposer shall address its program control approach to include method, content, and frequency of cost performance reporting as well as the approach for conducting variance analyses, developing corrective action plans, and assessing the impact on estimates to complete. The proposer shall define the content of technical and financial progress reports that enable efficient program monitoring, tracking, and reporting. Program management tools should be the same tools used internally to manage the program. No additional unique information for the Government is desired or required. The proposer shall also describe their proposed approach to subcontractor management, quality control, safety, and security as applicable.

e) Phase 1 Statement of Work (SOW) {not included in page count}

The SOW should clearly define the technical tasks/subtasks to be performed in Phase 1. For each task/subtask, the SOW should include:

- A general description of the objective (for each defined task/activity);
- A detailed description of the approach to be taken to accomplish each defined task/activity;
- Identification of the primary organization responsible for task execution (prime, subcontractor, by name, etc.);
- The completion criteria for each task/activity, such as a product, event, or milestone that defines its completion; and
- A definition of all deliverables (reports, data, software, documentation, hardware, demonstration system element, multimedia, etc.) to be provided to the Government in

support of the proposed research tasks/activities. Include expected delivery date for each deliverable.

If the proposer includes HSR work in Phase 1, these activities shall be included as separate WBS elements so they may be contracted as separate contract line items (CLINs).

The proposer shall employ a common work breakdown structure (WBS) for numbering all activities in the SOW, IMS, and cost proposal. This WBS should be fully populated to a low enough level such that individual task elements can be adequately assessed. The intent is to allow the Government sufficient visibility into the task element content and schedule to assess critical path, execution risk and cost realism. During program execution, this level of visibility will be crucial for assessing program progress and managing the critical path. It is envisioned that major hardware and software component development and test activities will be detailed to Level 4 or below such that there is a direct correlation between material purchases and individual tasks, and insight into the level of effort associated with individual risk reduction events or demonstrations. Lower levels of detail are acceptable for level-of-effort type tasks such as program management, program control, etc.

Do not include any proprietary information in the SOW or include any markings placing limitations on distribution on the pages containing the SOW.

f) Integrated Master Schedule (IMS) {not included in page count}

The IMS shall detail the specific tasks to be accomplished, their interrelationship, and time sequencing. The IMS should be provided at the same or lower level WBS as the SOW. The IMS will include a critical path analysis (CPA) that addresses all major events. This analysis will assess the key processes, developments or activities that will pace the development schedule. The IMS will be developed in a program management tool to a level of detail sufficient for the Government to make an independent analysis during proposal review and to implement CPA throughout the URSA program.

g) Human Subjects Research Approach {no page limit}

DARPA anticipates that no later than Phase 2, all efforts will require the performer to conduct periodic human subjects testing as part of evaluating URSA UIT capabilities and user interfaces. If a proposer plans to include human subjects testing in Phase 1, the proposal shall include evidence of a fully drafted protocol along with a plan for submission and review by an Institutional Review Board (IRB). Separate protocols may be required for internal testing of system prototypes with a civilian population and experimental evaluation of system prototypes with a military population. This paperwork will not count against the page limits established for the proposal.

h) Government Furnished Material {no page limit}

The proposer shall identify any required Government-furnished facilities, data, manpower, additional facility improvements over existing facility capabilities, and equipment to support the proposer's Phase 1 effort. This list should include rationale, ROM cost and dates needed. Cost of any Phase 1 GFE will count against the total Phase 1 funding available.

i) Intellectual Property {no page limit}

The proposal shall include a discussion of the proposed data rights approach for the entire program, including with regard to delivered assets at the conclusion of Phase 2. Due to the Government's desire to transition URSA technologies for a range of potential applications, the Government

desires a maximally open architecture with no proprietary interfaces. If the proposer intends to assert proprietary claims, they must provide rationale for this claim (e.g., potential commercial follow-on applications or use of Section 845), describe why it is in the best interest of the Government, and describe why it will not hamper the transition potential for URSA. Per Section VIII.A below, proposers responding to this BAA must submit a separate list of all technical data or computer software that will be furnished to the Government with other than unlimited rights. The Government will assume unlimited rights if proposers fail to identify any intellectual property restrictions in their proposals. Include in this section all proprietary claims to results, demonstration systems, deliverables or systems supporting and/or necessary for the use of the research, results, demonstration systems and/or deliverables. If no restrictions are intended, then the proposer should state "NONE".

G. Volume II, Cost Proposal Content and Format – Track A and Track B

All proposers, including FFRDCs, must submit the following:

1. Section 1. Administrative {no page limit}

a) Cover Sheet to include:

(1) BAA number (HR001118S0036);
(2) Lead Organization submitting proposal;
(3) Type of organization, selected among the following categories: "LARGE BUSINESS," "SMALL DISADVANTAGED BUSINESS," "OTHER SMALL BUSINESS," "HBCU," "MI," "OTHER EDUCATIONAL," OR "OTHER NONPROFIT";
(4) Proposer's reference number (if any);
(5) Other team members (if applicable) and type of organization for each;
(6) Proposal title;
(7) Technical track;
(8) Technical point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available), electronic mail (if available);
(9) Administrative point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available), electronic mail (if available);
(10) Award instrument requested: cost-plus-fixed-fee (CPFF), cost-contract—no fee, cost sharing contract – no fee, or other type of procurement contract (specify), or other transaction for prototype;
(11) Place(s) and period(s) of performance;
(12) Summary of the costs of the proposed research, including total base cost, estimates of base cost in each year of the effort, estimates of itemized options in each year of the effort, and cost sharing if relevant;
(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) DUNS number;
(16) TIN number;

(17) Cage Code;
(18) Subawardee information;
(19) Proposal validity period (minimum 180 days);
(20) Date proposal was submitted.

(b) Official transmittal letter

(c) Table of contents, list of figures, list of acronyms, compliance matrix or any other standard front matter

2. Section 2. Cost and Pricing Data

The cost proposal has no page count limitation. The cost proposal should be based on an estimated start date of November 1, 2018. Track A cost proposals should include an 18-month base period and a 3-month option period. Track B proposals should include an approximately 12-month base period only. Summary cost information shall be provided using the excel spreadsheets and guidance provided in Attachments 1, 2 and 3 and using the same WBS as the SOW and IMS. Proposers should use Attachment 1 and 2 templates directly. Attachment 3 and supporting cost information may be provided in the proposer's format. The Government strongly encourages that tables included in the cost proposal also be provided in an editable (e.g., MS Excel) format with calculation formulas intact to allow traceability of the cost proposal numbers across the prime and subcontractors.

Supporting cost and pricing information shall be provided in sufficient detail to substantiate the summary cost information. The basis of estimate (BOE) shall include a description of the method used to estimate costs and supporting documentation. The material BOE should include bills of material for items with total cost >$10K for commercial items, vendor quotes, past purchase orders or past invoices with explanation of any adjustment factors, such as engineering estimates and complexity factors.

An itemization of any information technology (IT) purchase, as defined by FAR 2.101 – Documentation supporting the reasonableness of the proposed equipment costs (vendor quotes, past purchase orders/purchase history, detailed engineering estimates, etc.) shall be provided, including a letter stating why the proposer cannot provide the requested resources from its own funding for prime and all sub-awardees.

Any proposed tasks that include human subjects testing should be identified as fully separable tasks with separate cost estimates for each and a start date for the human subjects testing tasks defined relative to contract start. This start date should take into account the amount of time required to complete the IRB and DoD review and approval process. HSR cost estimates should include all separable parts to support the testing effort, such as planning, travel, analysis, test execution, expendables, and equipment transport.

Per FAR 15.403-4, certified cost or pricing data shall be required if the proposer is seeking a procurement contract award per the referenced threshold, unless the proposer requests and is granted an exception from the requirement to submit cost or pricing data. Certified cost or pricing data are not required if the proposer proposes an award instrument other than a procurement contract (e.g., a grant, cooperative agreement, or other transaction.)

a) Subawardee Proposals

The prime contractor is responsible for compiling and providing all team member proposals. Interdivisional Work Transfer Agreements (IWTA) or similar arrangements will be assessed in the same way as subcontractors and require the same supporting material. Subcontractor cost estimates must be substantiated by a subcontractor proposal, including statement of work and cost estimate. The subcontractor proposals must be fully substantiated, including basis of estimate for labor, material and other direct costs. Fully disclosed proprietary subcontractor cost proposals may be provided to the Government under separate cover. Subcontractor proposals (and/or spreadsheet template) are required from all subs or IWTAs, regardless of tier. Subcontractor proposals shall include DCMA and DCAA POC information as applicable, as well as the subcontractor's DUNS number, TIN number and CAGE code. The prime contractor must provide appropriate cost or price analyses of subcontractor proposals to establish the reasonableness of proposed subcontract prices. Subcontractor SOWs, IMS and costs shall use the same WBS as the prime contractor. If the value of the subcontractor effort exceeds $150K, the subcontractor shall complete the Attachment 1 spreadsheet for all applicable fields, providing the same level of detail as required by the prime and using the same WBS as the prime. If the total subcontract value is below $150K, the proposed subcontractor shall complete the excel spreadsheet provided under Attachment 2, which only requires completion of the summary table, materials, travel, equipment and other direct costs tabs in the spreadsheet. For minor Tier 2 and lower subcontractors, the spreadsheet submission is adequate and a separate cost proposal is not required.

All proprietary subcontractor proposal documentation, prepared at the same level of detail as that required of the prime, shall be provided to the Government either by the prime contractor or by the subcontractor organization when the proposal is submitted. Proprietary subcontractor proposals shall be submitted via DARPA's BAA Website (https://baa.darpa.mil) in accordance with the instructions provided in Section IV.H.3.b.

b) Other Transaction Requests

The Government may award either a Federal Acquisition Regulation (FAR) based contract or an Other Transaction for Prototype (OT) agreement for prototype system development. Proposers requesting an OT must include a detailed list of milestones. Each milestone must include the following:

- Milestone description,
- Measurable and meaningful accomplishment criteria associated with each milestone,
- Due date, and
- Payment/funding schedule (to include, if cost share is proposed, awardee and Government share amounts).

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

H. Additional Proposal Information

1. Proprietary Markings

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

2. Security Information

DARPA anticipates that submissions received under this BAA will be unclassified. However, should a proposer wish to submit classified information, an unclassified e-mail must be sent to HR001118S0036@darpa.mil as soon as possible, but no later than three weeks prior to the proposal due date, requesting submission instructions from the Technical Office PSO. If a determination is made that the award instrument may result in access to classified information, a SCG and/or DD Form 254 will be issued by DARPA and attached as part of the award.

If proposers elect to include classified information in their proposals, this information shall be provided as a classified addendum. The classified addendum shall use the same outline and section numbering as the unclassified proposal. Information included in the classified addendum will count towards the page count in relevant sections. The classified addendum must follow the guidance in the following sections. If a proposer intends to submit a classified addendum, and when able according to security guidelines, we ask that proposers send a notice no later than three weeks prior to the proposal due date as notification that there is a classified portion to the proposal. If needed, DARPA will then provide specific security classification guidance via a Security Classification Guide (SCG) and/or DARPA DD Form 254, "DoD Contract Security Classification Specification".

a) Classified Proposal Addendum Markings

Classified submissions shall be transmitted and marked in accordance with the following guidance. If a submission contains Classified National Security Information or the suspicion of such, as defined by Executive Order 13526, the information must be appropriately and conspicuously marked with the proposed classification level and declassification date. Submissions requiring DARPA to make a final classification determination shall be marked as follows:

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

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

b) Classified Submission Requirements and Procedures

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

Workforce Improvement Program). Additional information on the subjects discussed in this section may be found at http://www.dss.mil.

Proposers choosing to submit classified information from other collateral classified sources (i.e., sources other than DARPA) must ensure (1) they have permission from an authorized individual at the cognizant Government agency (e.g., Contracting Officer, Program Manager); (2) the proposal is marked in accordance with the source Security Classification Guide (SCG) from which the material is derived; and (3) the source SCG is submitted along with the proposal.

When submitting a hard copy of the classified addendum according to the instructions outlined below, proposers should submit six (6) hard copies of the classified portion of their proposal and two (2) CD-ROMs containing the classified portion of the proposal as a single searchable Adobe PDF file.

Confidential, Secret, and Top Secret Information

Use transmission, classification, handling, and marking guidance provided by previously issued SCGs, the DoD Information Security Manual (DoDM 5200.01, Volumes 1 - 4), and the National Industrial Security Program Operating Manual, including the Supplement Revision 1 (DoD 5220.22-M and DoD 5200.22-M Sup. 1), when submitting Confidential, Secret, and/or Top Secret classified information.

Confidential and Secret

Confidential and Secret classified information may be submitted via ONE of the two following methods to the mailing address listed in the contact information in Part I of this BAA:

- Hand-carried by an appropriately cleared and authorized courier to the DARPA Classified Document Registry (CDR). Prior to traveling, the courier shall contact the DARPA CDR at 703-526-4052 to coordinate arrival and delivery.

OR

- Mailed via U.S. Postal Service (USPS) Registered Mail or USPS Express Mail. All classified information will be enclosed in opaque inner and outer covers and double-wrapped. The inner envelope shall be sealed and plainly marked with the assigned classification and addresses of both sender and addressee. Senders should mail to the mailing address listed in the contact information herein.

The inner envelope shall be addressed to Defense Advanced Research Projects Agency, ATTN: DARPA/TTO Dan Greenbaum, with a reference to the BAA number.

The outer envelope shall be sealed with no identification as to the classification of its contents and addressed to Defense Advanced Research Projects Agency, Security & Intelligence Directorate, Attn: CDR.

Top Secret Information

Top Secret information must be hand-carried by an appropriately cleared and authorized courier to the DARPA CDR. Prior to traveling, the courier shall contact the DARPA CDR at 703-526-4052 to coordinate arrival and delivery.

Sensitive Compartmented Information (SCI)

SCI must be marked, managed and transmitted in accordance with DoDM 5105.21 Volumes 1 - 3. Questions regarding the transmission of SCI may be sent to the DARPA Technical Office Program Security Officer (PSO) via the BAA mailbox or by contacting the DARPA Special Security Officer (SSO) at 703-812-1970.

Successful proposers may be sponsored by DARPA for access to SCI. Sponsorship must be aligned to an existing DD Form 254 where SCI has been authorized. Questions regarding SCI sponsorship should be directed to the DARPA Personnel Security Office at 703-526-4543.

Special Access Program (SAP) Information

SAP information must be marked in accordance with DoDM 5205.07 Volume 4 and transmitted by specifically approved methods which will be provided by the Technical Office PSO or their staff. Proposers choosing to submit SAP information from an agency other than DARPA are required to provide the DARPA Technical Office PSO written permission from the source material's cognizant Special Access Program Control Officer (SAPCO) or designated representative. For clarification regarding this process, contact the DARPA Technical Office PSO via the BAA mailbox or the DARPA SAPCO at 703-526-4102.

Additional SAP security requirements regarding facility accreditations, information security, personnel security, physical security, operations security, test security, classified transportation plans, and program protection planning may be specified in the DD Form 254.

NOTE: All proposals containing Special Access Program (SAP) information must be processed on a SAP information technology (SAP IT) system that has received an Approval-to-Operate (ATO) from the DARPA Technology Office PSO or other applicable DARPA SAP IT Authorizing Official. The SAP IT system ATO will be based upon the Risk Management Framework (RMF) process outlined in the Joint Special Access Program Implementation Guide (JSIG), current version (or successor document). (Note: A SAP IT system is any SAP IT system that requires an ATO. It can range from a single laptop/tablet up to a local and wide area networks.)

The Department of Defense mandates the use of a component's SAP enterprise system unless a compelling reason exists to use a non-enterprise system. The DARPA Chief Information Officer (CIO) must approve any performer proposal to acquire, build, and operate a non-enterprise SAP IT system during the awarded period of performance. Use of the DARPA SAP enterprise system, SAVANNAH, does not require CIO approval.

SAP IT disposition procedures must be approved by the DARPA Senior Authorizing Official, or SAPCO, IAW the OSD SAPCO Memorandum, "Disposition of DoD Special Access Program Information Technology Devices," July 27, 2017.

3. (for FAR-based Procurement Contracts Only)

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

The following provisions and clause apply to all solicitations and contracts; however, the definition of "controlled technical information" clearly exempts work considered fundamental research and therefore, even though included in the contract, will not apply if the work is fundamental research.

DFARS 252.204-7000, "Disclosure of Information"

DFARS 252.204-7008, "Compliance with Safeguarding Covered Defense Information Controls"
DFARS 252.204-7012, "Safeguarding Covered Defense Information and Cyber Incident Reporting"

The full text of the above solicitation provision and contract clauses can be found at http://www.darpa.mil/work-with-us/additional-baa#NPRPAC.

Compliance with the above requirements includes the mandate for proposers to implement the security requirements specified by National Institute of Standards and Technology (NIST) Special Publication (SP) 800-171, "Protecting Controlled Unclassified Information in Nonfederal Information Systems and Organizations" (see https://doi.org/10.6028/NIST.SP.800-171r1) that are in effect at the time the BAA is issued.

For awards where the work is considered fundamental research, the contractor will not have to implement the aforementioned requirements and safeguards; however, should the nature of the work change during performance of the award, work not considered fundamental research will be subject to these requirements.

5. Human Research Subjects/Animal Use

Proposers that anticipate involving Human Research Subjects or Animal Use must comply with the approval procedures detailed at http://www.darpa.mil/work-with-us/additional-baa.

6. Approved Cost Accounting System Documentation

Proposers that do not have a Cost Accounting Standards (CAS) complaint accounting system considered adequate for determining accurate costs that are negotiating a cost- type procurement contract must complete an SF 1408. For more information on CAS compliance, see http://www.dcaa.mil/. To facilitate this process, proposers should complete the SF 1408 found at http://www.gsa.gov/portal/forms/download/115778 and submit the completed form with the proposal.

7. Small Business Subcontracting Plan

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

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

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

9. Intellectual Property

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

a) For Procurement Contracts

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

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

(1) For All Non-Procurement Contracts

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

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

All proposers must be registered in SAM unless exempt per FAR 4.1102. FAR 52.204-7, "System for Award Management" and FAR 52.204-13, "System for Award Management Maintenance" are incorporated into this BAA. See http://www.darpa.mil/work-with-us/additional-baa for further information.

10. Submission Information

DARPA will acknowledge receipt of all submissions and assign an identifying control number that should be used in all further correspondence regarding the submission. DARPA intends to use electronic mail correspondence regarding HR001118S0036. Submissions may not be submitted by fax or e-mail; any so sent will be disregarded.

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

Proposals must be received by DARPA on or before the due date provided in Part I: Overview Information in order to be considered during the initial round of selections; however, proposals received after this deadline may be evaluated up to six months (180 days) from date of posting on FedBizOpps (https://www.fbo.gov). The ability to review and select proposals submitted after the initial round deadline specified in the BAA or due date otherwise specified by DARPA will be contingent on availability of funds. Proposers are warned that the likelihood of available funding is greatly reduced for proposals submitted after the initial closing date deadline.

a) Abstract Submission

Proposers who choose to use abstracts are strongly encouraged to submit an abstract in advance of a proposal. This procedure is intended to minimize unnecessary effort in proposal preparation and review. The time and date for submission of abstracts is specified in Part I, Overview Information. DARPA will acknowledge receipt of the submission and assign a control number that should be used in all further correspondence regarding the abstract. DARPA intends to provide individual feedback on all abstracts within approximately one week of receipt, in accordance with Section VI.A.1.

Unclassified abstracts sent in response to this BAA may be submitted via DARPA's BAA Website (https://baa.darpa.mil). Please refer to the Proposal Submission section below for additional details. All abstracts submitted electronically through the DARPA BAA Submission website must be uploaded as zip files (.zip or .zipx extension). The final zip file should only contain the document(s) requested herein and must not exceed 50 MB in size. Only one zip file will be accepted per abstract; abstracts not uploaded as zip files will be rejected by DARPA.

b) Proposal Submission

Unclassified proposals sent in response to this BAA shall be submitted via DARPA's BAA Website (https://baa.darpa.mil). Note: If an account has already been created for the DARPA BAA Website, this account may be reused. If no account currently exists for the DARPA BAA Website, visit the website to complete the two-step registration process. Submitters will need to register for an Extranet account (via the form at the URL listed above) and wait for two separate e-mails containing a username and temporary password. After accessing the Extranet, submitters may then create an account for the DARPA BAA website (via the "Register your Organization" link along the left side of the homepage), view submission instructions, and upload/finalize the proposal. Proposers using the DARPA BAA Website may encounter heavy traffic on the submission deadline date; proposers should start this process as early as possible.

All unclassified concepts submitted electronically through DARPA's BAA Website must be uploaded as zip files (.zip or .zipx extension). The final zip file should be no greater than 50 MB in size. Only one zip file will be accepted per submission, and submissions not uploaded as zip files will be rejected by DARPA.

Classified submissions should NOT be submitted through DARPA's BAA Website (https://baa.darpa.mil), though proposers will likely still need to visit https://baa.darpa.mil to register their organization (or verify an existing registration) to ensure the BAA office can verify and finalize their submission.

For a proposal that includes both classified and unclassified information, the unclassified portion can be submitted through the DARPA BAA Website, per the instructions above. The classified addendum must be mailed separately, according to the instructions outlined in the "Security Information" section above.

Technical support for DARPA's BAA Website may be reached at BAAT_Support@darpa.mil, and is typically available during regular business hours, Eastern Time.

11. Funding Restrictions

Not applicable.

12. Other Submission Requirements

DARPA will post a consolidated Frequently Asked Questions (FAQ) document. To Access the posting go to: http://www.darpa.mil/work-with-us/opportunities. Under the HR001118S0036 summary will be a link to the FAQ. Submit your questions by e-mail to HR001118S0036@darpa.mil. Questions must be received by the Questions due date listed in Part I: Overview Information.

V. Application Review Information

A. Evaluation Criteria – Track A

Proposals will be evaluated using the following criteria: Overall Scientific and Technical Merit, Proposer's Capabilities and/or Related Experience, Potential Contribution and Relevance to the DARPA Mission and Cost Realism. The first three criteria are of equal level of importance. Cost Realism is of lesser importance.

1. Overall Scientific and Technical Merit

The Government will review the proposed program approach to assess the extent to which the proposal demonstrates understanding of the URSA program vision and the technical and programmatic challenges. The Government will also assess the extent to which the proposed approach meets URSA overall program objectives.

The proposed technical approach is innovative, feasible, achievable, and complete.
The Government will review the proposed initial UIT concept to assess the extent to which their UIT will be appropriate to enable system integration and evolutionary capability demonstrations meeting overall program objectives. The Government will examine the technical, trade study and analysis, and system requirements development approaches to assess the extent to which the approach is founded on a strong systems engineering process to guide UIT engine/system evolution, systems integration, and compelling interim demonstrations. The Government will assess the extent to which the proposer's approach to behavioral analysis and evidence accumulation is consistent with the URSA vision and objectives. The Government will review the analysis, data and other substantiating information regarding the proposer's UIT concept to assess the technical maturity and feasibility of the proposed initial UIT concept to achieve the proposed Phase 1 demonstrations and meet the Phase 2 go/no-go criteria. The Government will review the technical approach for achieving the Phase 1 metrics, including the proposed Phase 1 data set and demonstrations, to assess the adequacy and fidelity of the approach to validating the Phase 1 metrics. The Government will also review the proposed approach to achieving the Phase 2 metrics and the extent to which the proposal information substantiates the capability to do so.

The Government will review the initial UDDP to assess the extent to which the plan adequately addresses all key risk areas for the proposed UIT approach. The Government will also assess whether the UDDP provides a robust basis for tracking UIT maturation and risk throughout the program. The UDDP will be reviewed to assess whether key risk reduction activities and demonstrations are appropriately defined and adequately validate technologies and attributes with reasonable progression of activities culminating in final Phase 2 live demonstrations. The

Government will also assess whether the test approach indicates that the proposer has adequate understanding of the unique test challenges, test environment, and data validation.

The Government will review the Phase 1 program plan, review schedule and deliverables to assess whether they are consistent with Phase 1 Statement of Objectives, are clearly defined, and provide adequate insight into technical progress of the program at appropriate intervals. The Government will review the proposed approach to interacting with and analyzing the results of Track B performer efforts to assess whether the performer has adequate opportunities and a robust assessment approach for incorporating successful Track B performers onto their team. The Government will assess whether the management approach includes a robust plan for software development management, tracking program technical and schedule progress, program control, subcontractor management and integration, and other key management elements.

The Government will also assess whether the Phase 1 SOW and IMS are credible, executable, and address the Phase 1 objectives, deliverables, program metrics and Phase 2 go/no go criteria. The Government will assess the extent to which the SOW and IMS detail activities to WBS Level 4 and are traceable to the cost proposal. The Government will also assess whether the IMS captures all the SOW tasks, shows the dependencies among the tasks, and correctly displays the critical path.

Lastly, the Government will review the extent to which initial Phase 2 program plan is feasible, meets Phase 2 metrics, and can be accomplished within Phase 2 schedule objectives and ROM cost provided. The Government will assess whether the proposer has an adequate understanding of and ability to perform live field testing demonstrations in Phase 2.

2. Proposer's Capabilities and/or Related Experience

The proposer's prior experience in similar efforts clearly demonstrates an ability to deliver products that meet the proposed technical performance within the proposed budget and schedule. The proposed team has the expertise to manage the cost and schedule. Similar efforts completed/ongoing by the proposer in this area are fully described including identification of other Government sponsors.

The Government will review the capabilities and expertise of the proposed team to assess whether the team has adequate expertise across the range of disciplines required to successfully perform the URSA program, including previous experience on programs with a similar level of complexity and in key risk areas. The Government will assess whether the proposal provides evidence of strengths in the technical areas required to develop their system level solution, including, as appropriate: modeling and simulation, live game play, software and hardware in the loop simulation and test environments, field experiments with autonomous systems, autonomous decision frameworks, and social and human behavior. The Government will also assess the extent to which proposed team has facilities and corporate resources to accomplish Phase 1 and 2.

The Government will review the qualifications and relevant experience of key personnel, including at a minimum the Program Manager, Chief Engineer, Chief Systems Engineer, Software Development Lead, System Integration and Test Lead and functional area leads. The Government will assess whether key personnel expertise and proposed level of effort are consistent with their proposed role on the program. The Government will also assess the extent to which key personnel have direct experience on the programs cited as the team's experience base.

3. Potential Contribution and Relevance to the DARPA Mission

The potential contributions of the proposed effort are relevant to the national technology base. Specifically, DARPA's mission is to make pivotal early technology investments that create or prevent strategic surprise for U.S. National Security.

The Government will review the proposed Phase 1 and 2 URSA program, including the UIT concept, development and demonstration approach, and envisioned final demonstrations to assess the extent to which the proposed program is consistent with DARPA's program vision and relevant to a future operational URSA capability. This assessment will consider, the maturity of the capability planned to be achieved in Phase 2, the military utility and transition potential of the envisioned Phase 2 products and the scope of additional development that would be required to achieve an operational capability. The Government will also assess the scalability and extensibility of the proposed URSA capability to multiple environments and scenarios, as well as the degree to which the URSA architecture will enable future integration into DoD platforms and system of systems.

The Government will review the proposed HSR approach (if any) to assess the extent to which the proposer has adequately planned for these activities to ensure there will be no adverse effect to program execution.

In addition, this evaluation will take into consideration the extent to which the proposed intellectual property (IP) rights will potentially impact the Government's ability to transition the technology to the research, industrial, and operational military communities.

4. Cost Realism

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

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

B. Evaluation Criteria – Track B

Proposals will be evaluated using the following criteria: Overall Scientific and Technical Merit, Proposer's Capabilities and/or Related Experience, Potential Contribution and Relevance to the DARPA Mission and Cost Realism. The first three criteria are of equal level of importance. Cost Realism is of lesser importance.

1. Overall Scientific and Technical Merit

The proposed technical approach is innovative, feasible, achievable, and complete. The Government will review the proposed enabling capability to assess the extent to which this

capability is relevant to the URSA program vision and the technical and programmatic challenges. The Government will review the analysis, data and other substantiating information regarding the proposer's enabling capability concept to assess the maturation plan and feasibility of the proposed enabling capability to accomplish the proposed Phase 1 effort and deliverables. The Government will review the extent to which the proposal identifies major technical risks and planned mitigation efforts are clearly defined and feasible.

The Government will review the Phase 1 program plan, review schedule and deliverables to assess whether they and provide adequate insight into technical progress of the program at appropriate intervals. The Government will review the proposed approach to interacting with and sharing their results with the Track A performers to assess whether the performer has a robust approach for transitioning onto a Track A team for Phase 2. The Government will assess whether the management approach includes a plan for tracking program technical and schedule progress, program control, subcontractor management and integration, and other key management elements.

The Government will also assess whether the Phase 1 SOW and IMS are credible, executable, and address the Phase 1 objectives and deliverables. The Government will assess the extent to which the SOW and IMS detail activities to WBS Level 4 and are traceable to the cost proposal. The Government will also assess whether the IMS captures all the SOW tasks, shows the dependencies among the tasks, and correctly displays the critical path.

2. Proposer's Capabilities and/or Related Experience

The proposer's prior experience in similar efforts clearly demonstrates an ability to deliver products that meet the proposed technical performance within the proposed budget and schedule. The proposed team has the expertise to manage the cost and schedule. Similar efforts completed/ongoing by the proposer in this area are fully described including identification of other Government sponsors.

The Government will review the capabilities and expertise of the proposed team to assess whether the team has adequate expertise across the range of disciplines required to successfully perform the proposed Phase 1 effort, including previous experience on programs with a similar level of complexity and in key risk areas.

The Government will review the qualifications and relevant experience of key personnel, including the Program Manager and functional area leads. The Government will assess whether key personnel expertise and proposed level of effort are consistent with their proposed role on the program. The Government will also assess the extent to which key personnel have direct experience on the programs cited as the team's experience base.

3. Potential Contribution and Relevance to the DARPA Mission

The potential contributions of the proposed effort are relevant to the national technology base. Specifically, DARPA's mission is to make pivotal early technology investments that create or prevent strategic surprise for U.S. National Security.

The Government will review the proposed enabling capability to assess the extent to which the proposed concept is consistent with DARPA's program vision and relevant to a future operational URSA capability. This assessment will consider, the maturity of the capability achieved in Phase 1, and the transition potential of the Phase 1 deliverable to a Track A Phase 2 effort.

The Government will review the proposed HSR approach (if any) to assess the extent to which the proposer has adequately planned for these activities to ensure there will be no adverse effect to program execution.

In addition, this evaluation will take into consideration the extent to which the proposed intellectual property (IP) rights will potentially impact the Government's ability to transition the technology to the research, industrial, and operational military communities.

4. Cost Realism

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

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

C. Review of Proposals

1. Review Process

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

DARPA will conduct a scientific/technical review of each conforming proposal. Conforming proposals comply with all requirements detailed in this BAA; proposals that fail to do so may be deemed non-conforming and may be removed from consideration. Proposals will not be evaluated against each other since they are not submitted in accordance with a common work statement. DARPA's intent is to review proposals as soon as possible after they arrive; however, proposals may be reviewed periodically for administrative reasons.
Award(s) will be made to proposers whose proposals are determined to be the most advantageous to the Government, consistent with instructions and evaluation criteria specified in the BAA herein, and availability of funding.

2. Handling of Source Selection Information

DARPA policy is to treat all submissions as source selection information (see FAR 2.101 and 3.104), and to disclose their contents only for the purpose of evaluation. Restrictive notices notwithstanding, during the evaluation process, submissions may be handled by support contractors for administrative purposes and/or to assist with technical evaluation. All DARPA support contractors performing this role are expressly prohibited from performing DARPA-sponsored technical research and are bound by appropriate nondisclosure agreements.

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

3. Federal Awardee Performance and Integrity Information (FAPIIS)

Per 41 U.S.C. 2313, as implemented by FAR 9.103 and 2 CFR § 200.205, prior to making an award above the simplified acquisition threshold, DARPA is required to review and consider any information available through the designated integrity and performance system (currently FAPIIS). Awardees have the opportunity to comment on any information about themselves entered in the database, and DARPA will consider any comments, along with other information in FAPIIS or other systems prior to making an award.

VI. Award Administration Information

A. Selection Notices and Notifications

1. Abstracts

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

2. Proposals

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

B. Administrative and National Policy Requirements

1. FAR and DFARS Clauses

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

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

Further information on Controlled Unclassified Information on Non-DoD Information Systems is incorporated herein can be found at http://www.darpa.mil/work-with-us/additional-baa.

3. Representations and Certifications

If a procurement contract is contemplated, prospective awardees will need to be registered in the SAM database prior to award and complete electronic annual representations and certifications consistent with FAR guidance at 4.1102 and 4.1201; the representations and certifications can be found at www.sam.gov. Supplementary representations and certifications can be found at http://www.darpa.mil/work-with-us/additional-baa.

.

4. Terms and Conditions

C. Reporting

The number and types of reports 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 on before award. Reports and briefing material will also be required as appropriate to document progress in accomplishing program metrics. A Final Report that summarizes the project and tasks will be required at the conclusion of the performance period for the award, notwithstanding the fact that the research may be continued under a follow-on vehicle. At least one copy of each report will be delivered to DARPA and not merely placed on a SharePoint site.

D. Electronic Systems

1. Wide Area Work Flow (WAWF)

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

2. i-Edison

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

VII. Agency Contacts

For information concerning agency level protests see http://www.darpa.mil/work-with-us/additional-baa#NPRPAC.
Administrative, technical, or contractual questions should be sent via e-mail to HR001118S0036@darpa.mil. All requests must include the name, e-mail address, and phone number of a point of contact.

The BAA Coordinator may be reached at:

HR001118S0036@darpa.mil

DARPA/TTO
ATTN: HR001118S0036
675 North Randolph Street
Arlington, VA 22203-2114

VIII. Other Information

Not Applicable