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**Naval Information  
Warfare Center**



**PACIFIC**

In collaboration with the  
Intelligence Advanced Research Projects Activity



**I A R P A**

CREATING ADVANTAGE THROUGH RESEARCH & TECHNOLOGY

**Broad Agency Announcement (BAA)**

**Smart Electrically Powered and Networked Textile Systems (SMART ePANTS) Program**

**N66001-22-S-4705**

**Release Date: 5 July 2022**

## **PART I: OVERVIEW INFORMATION**

This notice constitutes a Broad Agency Announcement (BAA) and sets forth research of interest in the area described in detail below. The solicitation process will follow Federal Acquisition Regulation (FAR) Part 35, Research and Development Contracting, as supplemented with additional information included in this notice. Awards based on responses to this BAA will be considered the result of full and open competition.

- **Federal Agency Name:** Naval Information Warfare Center, Pacific (NIWC Pacific) on behalf of the Office of the Director of National Intelligence/Intelligence Advanced Research Projects Activity (IARPA)
- **Funding:** RDT&E (2 year)
- **Funding Opportunity Title:** SMART Electrically Powered And Networked Textile Systems (SMART ePANTS) Program
- **Announcement Type:** Initial Announcement
- **Funding Opportunity Number:** N66001-22-S-4705
- **Catalog of Federal Domestic Assistance (CFDA) Number:** Not applicable
- **Dates:**
  - Government Furnished Capability Open House (See Section 6.B.5.): 20 July 2022
  - Q&A Deadline Date: 20 July 2022 (4:00pm Pacific Time Zone)
  - Proposal Due Date for Initial Round of Selections: 6 September 2022 (4:00pm Pacific Time Zone)
- **Concise description of funding opportunity:** NIWC Pacific is soliciting proposals in accordance with Federal Acquisition Regulation (FAR) 6.102(d)(2), FAR 35.016 on behalf of IARPA. This notice constitutes a Broad Agency Announcement (BAA) and sets forth research of interest in active smart textile (AST) garments with integrated audio, video, and/or indoor location sensor systems. The solicitation process will follow Federal Acquisition Regulation (FAR) Part 35, Research and Development Contracting, as supplemented with additional information included in this notice. Awards based on responses to this BAA will be considered the result of full and open competition.
- **Anticipated individual awards:** Multiple awards are anticipated; the Government reserves the right to select for award all, some, one, or none of the proposals received in response to this announcement.
- **Types of instruments that may be awarded:** Procurement contracts<sup>1</sup>
- **Amendments:** Any amendments to this BAA will be posted via NAVWAR e-Commerce Central at <https://e-commerce.sscno.nmci.navy.mil> (Note that this does not include a "www" prefix).
- **Agency Contact:**

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- **Program Manager (PM):**

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<sup>1</sup> **Procurement Contract:** This is a standard government contract that follows the processes, format and terms and conditions as outlined in the Federal Acquisition Regulations (FAR) and supplementing Agency specific regulations.

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- **Program Website:**

<https://www.iarpa.gov/research-programs/smartepants>

## **1. FUNDING OPPORTUNITY DESCRIPTION:**

The Intelligence Advanced Research Projects Activity (IARPA) often selects its research efforts through the BAA process. The use of a BAA solicitation allows a wide range of innovative ideas and concepts. The BAA will appear on <https://sam.gov/>, Contract Opportunities, on the NAVWAR Contracts Directorate Website (<https://e-commerce.dc3n.navy.mil/>), and the IARPA website at <http://www.iarpa.gov/>. The following information is for those wishing to respond to this Program BAA.

This BAA is for the Smart Electrically Powered and Networked Textile Systems (SMART ePANTS) program. The Government is seeking innovative solutions for the SMART ePANTS program in this BAA. SMART ePANTS is envisioned to be a 42-month effort, beginning approximately January 15, 2023, through July 14, 2027.

### **1.A. Program Overview**

Intelligence Community (IC) and Department of Defense (DoD) missions often require sensor systems that can collect and communicate critical information on staff members' location and surroundings when they are working in dangerous or high stress environments. In these scenarios, mission safety and effectiveness are reduced when users are distracted by using the sensor system, just as taking a phone call or reading a text reduces safety when driving a vehicle. In IC and DoD missions however, distracted work can lead to serious national security risks.

Consider, for example on-site arms control inspections performed at nuclear fuel enrichment facilities, or at chemical manufacturing plants that are under monitoring by international organization procedures such as those of the International Atomic Energy Agency (IAEA), the Organization for the Prohibition of Chemical Weapons (OPCW) or the United Nations Monitoring Verification and Inspection Commission (UNMOVIC) for Iraq. During these missions, inspectors tour facilities replete with safety hazards, reach into cramped spaces to take samples, and pore over data presented to them on computer screens or on paper. The recorded audio and video data, and the location where the information was gathered is critical to mission success. However, if inspectors are distracted from their duties, or experience an impaired range of motion from carrying or wearing bulky equipment, personal injury or incomplete data gathering can occur. In an on-site inspection scenario, such incidents can lead to reduced confidence in arms control inspection integrity, eroding the effectiveness of international organizations to help avoid conflict.

Development of comfortably worn Active Smart Textile (AST)<sup>2</sup> garments for use in situations like on-site arms control inspections is the objective of IARPA's new Smart electrically Powered and Networked Textile Systems (SMART ePANTS) program. For maximum comfort and dexterity of the user, additional program objectives include sensor integration into clothing, where the garment maintains similar stretchability, bendability, surface roughness, and washability attributes to a comparable garment containing no sensor. SMART ePANTS sensor systems must also be safely worn against the skin, be reusable, and be capable of exporting the data they gather to an external data storage device (such as a computer hard drive) using non-proprietary formats. It is expected that the sensor systems will be entirely incorporated into garment components, especially fibers, yarn, and fabric, but may include (to a limited extent)

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<sup>2</sup> Active smart textiles (ASTs) are fabrics that are designed to adapt and change their functionality in response to changes in their external environment or user input. Unlike passive smart textiles (PST) such as Gore-Tex™ which rely on their physical structure to function, ASTs employ energy to power built-in sensors and/or actuators that sense, store, interpret or react to information from their environment. The definition employed to differentiate active and passive smart textiles may be found on the Loomia website: <https://www.loomia.com/blog/passive-vs-active-smart-textiles> (accessed July 17, 2021).

expected commercial (i.e., currently available for sale) garment accessories such as buttons, grommets, zippers, piping, or collar stays.

Like all interactive electronic devices, the ASTs developed under the SMART ePANTS program comprise four components: (1) a sensor(s) to gather information; (2) a computation and data storage unit; (3) a power source; and (4) interconnects that enable device operation. ASTs developed under this BAA shall be integrated to collect audio, video and/or indoor location data using a system comprising these four components. IARPA expects that these components will be distributed throughout the garment to maximize the use of the 2-3 m<sup>2</sup> of textile that most people wear to work. Detailed information about specific goals, objectives, metrics, and milestones can be found in Section 1.F Program Metrics.

### 1.A.1. Research Tracks

Proposals must fully describe the Offeror's technical approaches to address one or more of the following Research Tracks. Proposals must describe a plan to develop an AST built into a "primary garment" (defined as shirts, blouses, pairs of pants, dresses, socks, undergarments,<sup>3</sup> or swimwear). For this BAA, "integrated" means that all the required system components (the sensor, power source, computer and data storage, wires, switches, and other interconnects) have been assembled to work together, and that the system can record data from its environment as described in one or more of the following three research tracks:

**Track 1: Audio (Hear It)** – Develop an integrated system that can record a conversation between two or more people.

**Track 2: Video/Photography (See It)** – Record photographs and/or video under indoor office or factory conditions.

**Track 3: Location (Locate It)** – Record three-dimensional location data indoors relative to a starting point.

SMART ePANTS performance criteria for each Track are provided in this BAA, Section 1.E.1. Performance Criteria: Sensing Events.

### 1.A.2. Program Phases

The SMART ePANTS program will proceed in three phases that are designed to give Offerors time to explore potentially more speculative solutions early on while requiring more durable operational prototypes in Phases 2 and 3. More detail on technical metrics to be met for this BAA can be found in Section 1. F. Program Metrics. The following paragraphs introduce the program phases:

**Phase 1: System Integration (Build It)** – Phase 1 will last 18 months and will focus on the viability of the Offeror's proposed AST building approach. Offerors are required to develop a reusable, flexible, stretchable integrated AST that may be tested for the sensing events and comfort performance parameters summarized in Table 1 of this BAA. To perform the listed stretch and bend testing for Phase 1, all AST components must be integrated and attached to a stretchable, bendable substrate that transfers the mechanical stress conferred during testing. Exercise of the option to continue with the SMART ePANTS program into Phase 2 will consider a thorough, independent evaluation of the Offeror's submitted sensor system, and a plan for incorporation into a garment.

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<sup>3</sup> Undergarments include any kind of men's or women's underwear, including bras, slips, jockstraps or other garments worn close to the skin.

**Phase 2: Garment Integration (Wear It)** – Phase 2 will last 12 months and will focus on the development of a functional prototype AST that is woven, knitted, embroidered, or otherwise incorporated into a prototype garment that visually resembles a commercially available reference garment provided by the Offeror, as defined by metrics for stretch, bend, compression, surface roughness, wash, and breathability. At this point in the program, it is expected that the integrated garment shall be able to perform sensing events before, during and after the strains resulting from comfort and durability testing. Exercise of the option to continue with the SMART ePANTS program into Phase 3 will consider the ability of the Offeror’s submitted garment to meet Phase 2 AST metrics and a plan for meeting all final program metrics.

**Phase 3: Garment Comfort and Durability (Wash It)** – Phase 3 will last 12 months and will focus on the development of a functional prototype garment capable of meeting all final program metrics for the selected research Track, including AST performance, garment comfort, durability, and washability.

### **1.B. Team Expertise**

Collaborative efforts and teaming among Offerors are highly encouraged. It is anticipated that Offeror teams will be multidisciplinary and may include expertise and experience in multiple fields related to SMART ePANTS program goals.

### **1.C. Program Scope and Limitations**

Proposals shall explicitly address the following:

- **Integration Concept:** Proposed strategies to meet program-specified metrics must have firm theoretical bases that are described with sufficient detail that reviewers will be able to assess the viability of using project components, both separately and as an integrated unit. Proposals shall properly reference previous work upon which their approach is founded.
- **Development approach:** Proposals shall describe the technical approach they intend to meet program metrics.
- **Technical risks:** Proposals shall identify technical risks and proposed mitigation strategies for each.
- **Team and Program Management and Internal Testing and Evaluation:** Proposals shall describe the approach to leveraging and managing the contributions of Offeror team members and their approach to testing and evaluation (T&E) of their developed systems independently from IARPA’s T&E partner to the maximum extent possible.

The following areas of research are out of scope for the SMART ePANTS program:

- Solutions that are only contained within rigid items of a garment. An example of such a system would include an AST built into buttons of a shirt alone with only a conductive connection between them.
- Solutions without strong theoretical and experimental foundations.
- Solutions without plausible scientific support for the proposed results.
- Development of individual components without a plan for integration into a complete garment-integrated system.
- Solutions employing commercial rigid interconnects for data export.
- Partial solutions that cannot be independently tested and evaluated against program metrics.
- Solutions that employ radioactive materials.
- Approaches that propose, or are likely to result in, only incremental improvements over the current state-of-the-art.
- Solutions that cannot be packaged for safety.
- Solutions that are incompatible with being worn in a garment.
- Garments that intentionally deposit residue on the skin when worn.

- Solutions that are visually obvious, or that significantly disrupt the appearance or functionality of the garment.
- Solutions with significant limitations on operating conditions or operational parameters.
- Development of component technology that is not required for the Sensing Events described in this BAA.
- Solutions that focus primarily on the development of machine learning (ML) or artificial intelligence (AI) methods to model, interpret, or process audio, video, or location data.
- Solutions that contain arsenic or other acutely toxic elements or compounds.
- Solutions that produce sound louder than 2 dBA in the audible range.
- Solutions that cannot be made sufficiently robust for field use.
- Solutions that cannot be reused as prescribed in Table 1.
- Solutions that rely on solar or kinetic energy for operation.
- Solutions that are integrated within outerwear clothing items such as belts, overcoats, jackets, scarves, gloves, shoes, or hats.
- Solutions that are integrated into non-clothing personal items such as jewelry (necklaces, badges, brooches, watches, earrings, rings, headbands, combs, or other hair arranging items), personal items (pens, notebooks, canes, eyeglasses, backpacks, fanny packs, hearing aids or other assistive devices that are not integrated into clothing) or grossly out of scale rigid clothing items (buttons exceeding 10 mm diameter, or decorative clothing items that are permanently attached to the garment such as sequins, decorative lighting, or non-washable embroidery).
- Solutions that involve human subjects research and/or require Institutional Review Board (IRB) approval.

#### **1.D. Modelling and Theory**

Achieving program metrics will require Performers to develop experimental, analytical, or modeling evidence that their approach will result in a working prototype capable of achieving the performance, durability, and comfort metrics described in Section 1.F Program Metrics. It is anticipated that Performers will have to advance the state-of-the-art in every component of their AST throughout the lifetime of the program, particularly in Phase 1. Therefore, in Phases 1 and 2, all Performers must provide a model to show how they intend to meet the metrics for the next program phase using the sensing system technology they have developed in prior phases.

#### **1.E. Program Performance Criteria, and Test and Evaluation (T&E) Methods**

IARPA research programs include rigorous, objective evaluations aimed at demonstrating achievement of carefully designed technical performance metrics. This section describes the technical performance criteria for the program and gives an overview of how IARPA will measure program Performer success. Offerors shall use these criteria to explain how they will achieve successful research outcomes for the SMART ePANTS program. It is expected however, that T&E evaluation criteria will be refined or otherwise revised as the program progresses. Final criteria for Phase 1 of the program will be provided at program kickoff, with refinements to Phases 2 and 3 to be provided to all Performers on an as-needed basis.

At defined periods throughout the program, Performers will send five (5) test article ASTs to the IARPA T&E partner for independent evaluation, along with 5 control garments to be used for comparison purposes in durability and comfort evaluation. Independent T&E points are defined in Table 2: Program Waypoint, Milestone, and Deliverables Testing Timeline.

##### **1.E.1. Sensing Events**

The SMART ePANTS program's primary objective is to design garments capable of performing one or more of the following three sensing events listed below in order of increasing complexity, where Track 1 is the easiest and Track 3 poses the most difficult challenge to Offerors. Those who propose ASTs that respond to more than one Track with

the same device will be viewed more favorably<sup>4</sup>. Sensing events will all be collected indoors at regular intervals that are started and stopped by an on-garment actuator (such as an on-off switch) over the course of 8 hours within a temperature range of 0 – 40 °C. During each program phase, the T&E team will conduct five (5) Sensing Event tests for a Performer’s AST. Three Sensing Events before and two after comfort and durability testing. Program research Tracks and Sensing Events are:

#### Track 1: Audio (Hear It)

The SMART ePANTS objective for Track 1 is to develop an integrated audio sensing system capable of recording up to 60 minutes of conversation between at least two individuals at  $\geq 60$  dB Sound Pressure Level (SPL) at the microphone/receiver (400-3200 Hz minimum frequency range). Over an eight (8) hour testing time, 7.5 minutes of audio will be recorded by manual actuation hourly for 8 hours. Recorded speech shall have a Speech Transmission Index (STI) of 0.6/1.0 or higher, using the International Electrotechnical Commission (IEC) Method 60268-16:2020: Objective rating of speech intelligibility by a speech transmission index.

#### Track 2: Video/Photography (See It)

The SMART ePANTS objective for Track 2 is to develop an integrated video sensing system (field of view shall be  $> 55$  Degrees) capable of performing either or both of the following tasks:

- a. Recording 360 monochromatic photographs taken over the course of two hours (3 per minute), where photos including 12-point text can be read by commercial Optical Character Recognition (OCR) techniques at distances  $\geq 50$  cm under 200-500 Lumens ( $\text{lm}/\text{m}^2$ ) illumination (380-740 nm wavelength) and can clearly reproduce the resolution of Group 2, Line 2 of a US Air Force 51 Optical Resolution Test Chart<sup>5</sup>; and/or
- b. Recording a 2-minute monochromatic video under 500  $\text{lm}/\text{m}^2$  illumination ( $> 30$  frames per second, 380-740 nm wavelength) and able to discern the resolution of Group 2, Line 2 of a US Air Force 51 Optical Resolution Test Chart.

#### Track 3: Location (Locate It)

The SMART ePANTS objective for Track 3 is to develop an integrated indoor geolocation system capable of providing relative latitude, longitude, and elevation readings every ten minutes for one hour with an uncertainty of no more than  $\pm 10$  m at least 100 m away from a reference point of origin in three-dimensional space. Offerors should assume that the sensing system will be operating in a Global Navigation Satellite System (GNSS)-denied environment (e.g., in a building basement). No intentional external beacon signals may be employed to determine location. Systems may employ images or signals from onboard cameras or antennas as a reference to aid in location determination if desired (such as office furniture, lighting, stationary signals of opportunity (e.g., Wi-Fi routers or computer Telecommunications Electronics Material Protected from Emanating Spurious Transmissions, TEMPEST, emissions) from inside a facility to help determine location, but those reference points will not be known prior to testing. If desired, the Offeror may request a system calibration be performed to establish a point of origin one hour prior to performing a sensing event.

### **1.E.2. Representative Sensing Event Scenario**

Although no testing on humans is anticipated during the SMART ePANTS program, Offerors shall design their ASTs with the assumption that garments will need to perform sensing events under stresses and strains of a person’s normal workday in an office or factory. Specifically, the garment must withstand the stresses of storage, donning and doffing the garment, moving around in an office or factory environment indoors, conferring with colleagues while sitting or standing, eating meals, storage in a crumpled state, followed by data offloading a week or more after data collection, and washing as illustrated in Figure 1. All sensing events may be assumed to occur in a well-lit indoor room with no windows. Offerors shall clearly describe any expected deviation from these stresses on their garments in their proposal.

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<sup>4</sup> If an offeror proposes to develop a solution for more than one research Track, sensing events for each Track may be collected separately or together, as described in the offerors’ proposal.

<sup>5</sup> [https://www.researchgate.net/figure/USAF-1951-optical-calibration-target\\_fig1\\_230817663](https://www.researchgate.net/figure/USAF-1951-optical-calibration-target_fig1_230817663), accessed (March 8, 2022).

## EXPECTED GARMENT ENVIRONMENT



**Figure 1:** Expected conditions under which a SMART ePANTS AST might be stored and used.

### 1.E.3. Component Properties

Offerors shall propose to develop fully integrated ASTs capable of performing one or more sensing events described in Section 1.E.1. Sensing Events, of this BAA. The overall goal of the SMART ePANTS program is to develop stretchable, bendable, washable ASTs that are fully integrated into clothing. Electronic components built into expected rigid items of a commercial garment are permissible although they should be kept to a minimum. Expected rigid items of a commercial garment may include grommets, zippers, buttons, collar stays and underwires. *Proposals to develop ASTs comprising a lower fraction of rigid components will be reviewed more favorably than those using more rigid components.*

Ideally, components, and threads shall not exceed 0.6 mm diameter, with lower diameter threads viewed more favorably for proposal selection. Components that are  $\geq 0.6$  mm diameter within the garment are permitted but will be judged according to how much they detract from comfort/durability of the garment.

The proposal should clearly outline how all system components will be made stretchable, bendable, and washable by the end of the program. In keeping with the metrics in Table 1 in Section 1.F Program Metrics, all components must function as an integrated system, and must be reusable before and after the comfort and durability testing described in Section 1.E.3: Integrated System Comfort and Durability. Beyond the general component descriptions described in this paragraph, individual components must also possess the attributes described below. Offerors must provide a clear plan to develop a system that meets program metrics, but the value of individual components to the program will be weighted for proposal evaluation purposes. The component list below is described in order of increasing importance to the program.

1. *Sensors:* The selected sensor (camera, microphone, and/or geolocation sensor) shall have the ability to perform the Offeror-selected Sensing Events described in this BAA. No component shall be designed to emit any signal during sensing events.
2. *Computation and Data Storage:* AST data processing and storage shall function seamlessly with other system components. Sensor systems shall have the capability to record and store data from a single sensing event that can be offloaded to another device at a later time. To simplify required on-board computation, any



required post processing may be performed by an external device after the sensing event has concluded. Data offloading procedures must be performable by a non-expert user by wired, wireless, or other means that shall be described in the Offeror's application. Offloaded data shall be readable by some external device, with documentation and procedures for data extraction, processing, and synchronization provided to the government for all ASTs delivered. To improve the ability of the Government and its partners to access, interpret, and utilize software products developed under SMART ePANTS, all data and source code will be organized, annotated, formatted, and documented according to guidelines provided by IARPA.

3. *Power Source*: Power sources shall be matched to allow AST operation for an entire sensing event (as described in Section 1.E.1 Sensing Events) without reliance on an exterior power source for eight (8) hours. Power sources shall be rechargeable/refuellable as needed to perform sensing events before and after comfort and durability testing.
4. *Haptics*: User-evident actuation for on/off switches and any required operation (audio recording, photo taking, position finding) must be easily performed by the wearer when fully clothed in an office or factory setting without disrobing, using external objects (such as magnets or styluses or other electronic devices), or reaching beyond a person's everyday range of motion.
5. *Interconnects*: Interconnects employed shall allow for operation of the AST while also meeting the comfort and durability metrics defined in Table 1.

#### **1.E.4. Integrated System Durability and Comfort**

In addition to testing for successful performance of the Sensing Events described in Section 1.E.1. and compliance with Component Properties in Sections 1.E.3., Offeror ASTs will be tested for durability and comfort relative to offeror-selected closely matching commercial reference fabric swatches and garments made from the same material (See Section 1.G.2. Deliverables). Testing methods for durability and comfort for the SMART ePANTS program are based on recognized standards from the International Organization for Standardization (ISO), the American Association of Textile Chemists and Colorists (AATCC), the American Society of Testing and Materials (ASTM), and the Kawabata Evaluation System (KES)<sup>6</sup> test methods for textile durability and comfort. Testing methods to be used are listed in Table 1. Offerors who propose integrated systems with a greater operating range of these metrics (such as greater stretch) are more desirable. Offerors are requested to provide instructions for electrical evaluation of their ASTs (system and component) as necessary. A summary of the testing methods to be used is provided in this section.

**Test Article Deliverables:** Performers shall provide the following Test Article Deliverables to be used in the Sensing Event, Comfort and Durability Tests Described in Section 1.F. according to the Independent T&E Events Schedule described in Table 2. All Test Article Deliverables are due to the T&E Partner for each T&E Event in all program Phases, unless specifically stated otherwise in the list below:

1. **AST Test Article Garment Deliverables:** Five (5) AST garments capable of performing their proposed sensing events and meeting the metrics described in Table 1, called AST Test Article Garment Deliverables, to be delivered for T&E Events in Phases 2 and 3;
2. **AST Test Article Swatch Deliverables:** Five (5) fabric swatches (between 20x20 cm and 100x100 cm length and width) with the same built-in performance capabilities as AST Test Article Deliverables, but not yet converted into a garment. Individual components shall be positioned within the fabric swatch so that they may be tested individually for performance and failure modes. Component testing will be performed by the

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<sup>6</sup> Apurba Das, R. Alagirusamy, "Chapter 4: Tactile aspects of clothing comfort, Section 4.3.2 Objective Assessment", Science in Clothing Comfort, 2010, Woodhead Publishing India PVT. LTD. pp. 54-78. <https://doi.org/10.1533/9780857092830.54>

T&E Team on an as needed basis, depending on the construction and performance of AST Test Article Deliverables during the testing described in Table 1;

3. **Reference Test Article Garment Deliverables:** Five (5) reference primary garments without any integrated electronics, but otherwise with the same fabric and composition as the AST Test Article Garment Deliverables, to be delivered for T&E Events in Phases 2 and 3;
4. **Reference Test Article Swatch Deliverables:** Five (5) reference fabric swatches (between 20x20 cm and 100x100 cm length and width) with the same fabric and composition as the AST Test Article Swatch Deliverables.

### **Comfort and Durability Testing Methods**

*Stretch, Bending Stiffness, Compression, and Coefficient of Friction:* Testing will be performed on AST Test Article Swatch Deliverables and compared with Offeror-selected Reference Test Article Swatch Deliverables for all program Phases. Testing will be performed on swatch locations to be determined by the T&E partner, most likely at locations where electronic components have been or would be embedded. In some cases, the standard test method will require modification for functional testing due the physical properties of the Offeror's AST design. In cases where the modification may be significant, testing will also be performed on AST subsystems. Selected performers will work with the government to refine a final testing plan for the complete AST and system components. For durability testing, the performance of the electrical system will be evaluated before and after testing cycles/repetitions (See Section 1.F.).

*Wash:* Wash testing will be performed on AST Test Article Swatch Deliverables during Phase 1 and on AST Test Article Garment Deliverables in Phases 2 and 3. AST performance before and after wash cycling will be measured as well as the dimensional stability of the fabrics and garments. Following these test methods, the expected wash time is for 30 minutes in water at 20 °C in a top-loading washing machine, and an 8-hour line dry at 30% relative humidity indoors at 25 °C. Washing will be performed in a <10 kg load with all Test Articles from each individual performer for each T&E event together.

*Air Permeability, and Thermal and Evaporative Resistance:* Air Permeability and Thermal and Evaporative Resistance testing will be performed on AST Test Article Swatch Deliverables and Reference Test Article Swatch Deliverables for all program phases. Testing will determine the amount of air *impermeable* surface coverage resulting from the AST integration, and changes to thermal and water vapor transmission through the test article.

*Calendar Life:* AST Test Article Swatch Deliverable in Phase I and AST Test Article Garment Deliverables in Phases 2 and 3 will be tested for calendar life, where calendar life means the time between final preparation of the system for a sensing event, and the beginning of a successful sensing event test. For example, if a sensing system were battery powered, a calendar life of one week would mean that the garment was fully charged and placed in a clothes closet at room temperature (0 - 40 °C) for one week before being removed for immediate testing with no other preparation.

### **1.F. Program Metrics**

Achievement of metrics is a factor considered when determining whether to exercise options to continue performance under IARPA research contracts. IARPA has defined SMART ePANTS program metrics to evaluate effectiveness of the proposed solutions in achieving the stated program goal and objectives, and to determine whether satisfactory progress is being made to warrant continued funding of the Performers. The metrics described in this BAA are shared with the intent to scope the effort, while affording maximum flexibility, creativity, and innovation to Offerors proposing solutions to the stated problem. *All Offerors are expected to submit a research plan and testing instructions to meet the metrics described in this BAA. Proposals with a plan to exceed one or more program metrics will be evaluated more favorably.*

For purposes of this BAA, Offerors shall propose research that meets the technical metrics described in Section 1.E. Program Performance Criteria, and Test and Evaluation (T&E) Methods, and in this Section. It is anticipated that specific T&E protocols including specific test equipment will be established at Program Kickoff or shortly thereafter. Program metrics may be refined or further specified during the three phases of the SMART ePANTS program in

collaborative discussion with the T&E partner. If metrics change, revised metrics will be communicated in a timely manner to Performers.

This BAA puts forth definitions of expected AST performance, durability, and comfort, but there may exist other metrics that have not been contemplated by IARPA. It is acceptable for Offerors to propose alternative approaches, so long as such approaches are described in their proposal and are of a similarly challenging nature to those proposed in this BAA. Such alternate approaches will be evaluated in tandem with proposed techniques. In any case, SMART ePANTS will rely on the expertise of government and/or trusted agents (e.g., Federally Funded Research Development Centers, University Affiliated Research Centers) to independently measure the effective performance parameters as previously discussed, to refine measurement protocols as necessary, and to normalize textile and electronics testing regimes appropriately for a side-by-side comparison.

A summary of program metrics by phase is shown in Table 1. Phase 1 requires system components (See Section 1.E.3.) function separately and as an integrated system (See Section 1.E.4.). In Phase 2, systems will be integrated into a primary garment (Defined in Section 1.A.1.). At the end of Phase 3, the integrated garment will meet all program metrics.

**Sensing Event, Comfort and Durability Testing Sequence:** AST Test Article Garment Deliverables (Phases 2 and 3) and AST Test Article Swatch Deliverables (All Phases) will be evaluated for Sensing Event performance at least five (5) times (three before and two after their associated Comfort and Durability test) as summarized in Table 1. Performance factors for Sensing Events are listed in Section 1.E.1. Additional durability tests to be performed *during* sensing events may be developed, depending on Offerors' proposed approaches.

**Table 1: SMART ePANTS Program AST Comfort and Durability Metrics by Phase.**

<b>Metric (Standards)</b>		<b>Phase 1 (18 Months)</b>	<b>Phase 2 (12 Months)</b>	<b>Phase 3 (12 Months)</b>
<b>Stretch (ASTM D6614)</b>	Difference from reference fabric	<30 %	<20 %	<10 %
	Cycles/repetitions	x10	x50	x100
<b>Compression (KES-F3)</b>	Difference from reference fabric	N/A	<20 %	<10 %
	Cycles/repetitions	N/A	x50	x100
<b>Circular Bending Stiffness (ASTM 4032)</b>	Difference from reference fabric	<30 %	<20 %	<10 %
	Cycles/repetitions	x5	x10	x50
<b>Uniaxial Bending Stiffness (ASTM D1388)</b>	Difference from reference fabric	<30 %	<20 %	<10 %
<b>Compression (KES-F3)</b>	Difference from reference fabric	N/A	<20 %	<10 %
	Cycles/repetitions	N/A	x50	x100
<b>Coefficient of Friction (ASTM D1894)</b>	Difference from reference fabric	N/A	<20 %	<20 %
<b>Thermal and Evaporative Resistance (ASTM F1868)</b>	Difference from reference fabric	N/A	<20 %	<10 %
<b>Wash (AATCC/TM 135-2018t, ISO 6330:2021)</b>	Ability to perform sensing after X wash cycles	X = 1 cycle	X = 5 cycles	X = 15 cycles
<b>Air Permeability (ASTM D737)</b>	Difference from reference fabric		<20 %	<10 %
<b>Calendar Life</b>	Ability to perform sensing after X days of storage	X = 1 day	X = 7 days	X = 90 days

**1.G. Program Waypoints, Milestones, and Deliverables**

**1.G.1. Waypoints**

In addition to meeting the program metrics Table 1 at the times listed on Table 2, Offerors shall define interim “check-in” performance measurements called Waypoints which indicate technical progress of each task on the project. For example, Offeror AST Deliverables that are submitted on Month 15 of the program must meet the Metric requiring completion of seven Sensing Events as an integrated system. To show progress towards this Metric, an Offeror may propose Waypoints for each task, such as for their power source research indicating a forecasted energy capacity at Months 6, 9 and 12. Waypoints help the program management team to assess project progress and the need for any

course correction during the program. At a minimum, each project task should have Waypoints every 3-6 months (depending on importance of the task). More frequent waypoints are encouraged for important project tasks.

## **1.G.2. Deliverables**

A description of the program deliverables follows.

**Test Article Deliverables:** Performers shall provide the following Test Article Deliverables for each of the Independent T&E events described in Table 2. The type and quantity of Test Article Deliverables required for each Independent T&E event is specified in Section 1.E.3.

**AST Development Plan Deliverables:** Performers shall provide design documents and modeling and/or other calculations to demonstrate that their proposed system components can be expected to meet the program metrics for the Phase in which they are due. Models and/or other calculations shall support the Performer's ability to meet Phase 3 metrics by the end of the program.

**Technical Reporting:** Performers shall provide monthly technical reports no later than 10 days after the first of each month. These reports shall detail technical progress made towards waypoints and milestones completion, major risks, planned activities, trip summaries, changes to key personnel, and any potential issues or problem areas that require the attention of SMART ePANTS Program Management. Both the results presented at technical review meetings and technical reports will serve as an official record of progress. Technical reports shall include the results of internal performance tests as follows. Performers are expected to evaluate their ASTs continually throughout the program to measure progress toward achieving program metrics. Internal performance testing shall be a subset of the test protocols for performance in Section 1.E.1. Sensing Events, and for durability and comfort as described in Section 1.E.4. Integrated System Durability and Comfort. The results of internal performance testing shall be included in the Monthly Technical Reports, as internal performance testing is completed, no less frequently than every six months throughout program performance. The first Monthly Technical Report shall contain a description of the Performer's testing methodology for internal performance testing. The Performer and the PM shall agree on the Performer's testing methodology not later than the 3<sup>rd</sup> month after program kickoff, with the first internal testing to be completed not later than the 6<sup>th</sup> month of the program.

**Financial Reporting:** Performers shall provide monthly status reports (MSRs) not later than ten days after the first of each month. The MSRs shall summarize budget and spending and identify any financial issues that may affect the program or put achievement of program objectives at risk.

**Technical Review Meetings:** Performers shall support monthly technical review meetings in person at the Performer's site (see Site Visits below) or remotely (e.g., by means of telephone, Skype, WebEx, Microsoft TEAMS, video conference or similar, at the discretion of the PM). During these monthly technical review meetings, Performers will present their results, describe their progress toward waypoints and achievement of performance metrics, identify any issues that may affect their ability to meet metrics, milestones, or overall program objectives and describe a risk mitigation plan as required.

**Site Visits:** SMART ePANTS program management team and invited representatives of Government agencies will visit each Performer at their work site to conduct an in-depth review of progress toward program objectives and to meet with team members. Performers shall host these site visits at the sites where research for the SMART ePANTS program is being performed. During site visits, Performers will show their physical capabilities, and introduce the researchers working on the program to the program management team and invited Government representatives. The site visit shall be concurrent with the technical review meeting to be held in the same month.

**Kickoff and Program Wide Review Meetings:** Kickoff and program wide review meetings shall be held at a location to be determined by the PM, typically in the Washington, D.C. metropolitan area, where Performers shall share non-proprietary information and/or updates with the other Performers. Typically, program-wide review meetings, also known as Principal Investigator (PI) Meetings, will also include breakout sessions for each team to meet individually with the PM, the program management team, and the T&E team. At these breakout sessions, any results the Performers assert are proprietary shall be discussed. Performers shall plan to send no more than 2-3 key technical personal to the program wide review meetings, unless otherwise agreed with the PM. Unless otherwise specified in the program schedule or by the PM, kickoff and program wide review meetings are in addition to the monthly technical review meetings.

**1.G.3. Program Milestone and Deliverables Timeline and Deliverables**

Table 2 shows a timeline for the program with Government-defined milestones and deliverables.

**Table 2:** Program Waypoint, Milestone and Deliverables Testing Timeline

Event	Months after Kick-off			Deliverables
	Phase I	Phase II	Phase III	
<b>Kickoff Meeting (Beginning of each Phase)</b>	1	19	31	Read-ahead package due from Performers to the Government 7 days before meeting. If required by the PM, updates after the meeting are due 15 days after the meeting date.
<b>Program Wide Review Meeting</b>	16	28	42	Read-ahead package due from Performers to the Government 7 days before meeting. If required by the PM, updates after the meeting are due 15 days after the meeting date.
<b>Technical Review Meetings</b>	Monthly	Monthly	Monthly	Read-ahead package due from Performer to the Government 2 days before meeting. If required by the PM, updates after the meeting are due 15 days after the meeting date.
<b>Site Visits and Waypoint Review</b>	3, 9, 15	21, 27	34, 40	Site visits (to be held concurrently with Technical Review Meetings)

Event	Months after Kick-off			Deliverables
	Phase I	Phase II	Phase III	
<b>Test Article Deliverables</b>	15	27	41	Test Articles delivered by Performer for T&E. Deliverables shall be received at the T&E site specified by the Government no later than the final day of the listed month. Performers shall also provide documentation and training to the Government for proper usage of the AST. Documentation proving the safe shipment of deliverables to the T&E site is also required.
<b>AST Development Plan Deliverable</b>	17	29	41	Plan describing deliverables for the next program phase is delivered to the government. Deliverable shall be received by the Government no later than the final day of the listed month.
<b>Independent T&amp;E</b>	15-16	27-28	41-42	Upon receipt of the Performer Test Article Deliverables, T&E will be conducted. Performers may expect test results within two months of test article submission, but no later than the last day of the listed range of months.
<b>Financial and Technical Reports</b>	Monthly	Monthly	Monthly	Monthly financial and technical reports are due by the 10 <sup>th</sup> day of the following month.

Event	Months after Kick-off			Deliverables
	Phase I	Phase II	Phase III	
End of Phase	18	30	42	Phase Period of Performance Ends

In addition to scheduled deliverables shown in Table 2, the Government anticipates receiving the following as deliverables throughout the program (note that this list is not inclusive and is provided here as guidance for the Offerors). The award instrument type may alter this list.

- Any technical papers covering work funded by SMART ePANTS
- A final report for each program phase that concisely describes and summarizes the work conducted, technical achievements, and remaining technical challenges, shall be due one calendar month after the end of each phase: and
- A final summary report shall be due at the end of the overall period of performance.

### 1.H. Meeting and Travel Requirements

Offerors are expected to assume responsibility for administration of their projects and to comply with contractual and program requirements for reporting, attendance at program workshops, and availability for site visits. In-person events will be held as allowed by US government health recommendations and IARPA policy. The following paragraphs describe typical expectations for meetings and travel for IARPA programs as well as the contemplated frequency and locations of such meetings. In addition to ensuring that all necessary details of developed designs, approaches, and test articles are on track, each Performer will be required to be available to answer technical and programmatic questions from each T&E team in monthly status meetings.

#### 1.H.1. Kickoff and Program Wide Review Meetings

The SMART ePANTS program intends to hold a program kick-off meeting in the first month of the program and Program Wide Review Meetings on a regular basis throughout the program. The dates and locations of these meetings are to be specified at a later date, but for planning purposes, Offerors should use the approximate dates and locations listed in Table 2. These meetings will typically be of a two-day duration, will be held in the Washington, D.C. metropolitan area (or an alternate location in the United States at the discretion of the PM), and will focus on technical aspects of the program and on facilitating open technical exchanges, interaction, and sharing among the various program participants.

During all such meetings, program participants will be expected to present the non-proprietary technical status and progress of their projects to other participants and invited guests. Individual sessions for each Performer with the Government Team will also be scheduled to coincide with these workshops. Typically, meetings will also include breakout sessions for each team to meet individually with the PM, the program management team and the T&E team. At these breakout sessions, any results the Performers assert are proprietary shall be discussed. Performers shall plan to send no more than 2-3 key technical personal to the program wide review meetings, unless otherwise agreed with the PM. Unless otherwise specified in the program schedule or by the PM, kickoff and program wide review meetings are in addition to the monthly technical review meetings.

#### 1.H.2. Site Visits

Site visits by the Government Team including T&E partners and selected non-government advisors will generally take place according to the schedule in Table 2 but may increase to four times a year (at the discretion of the PM) during the life of the program. These visits will occur at the Performer's facility (either the prime or any subcontracted Performer). In addition to traditional means of conveying information such as reports and briefs on technical progress, details of successes and issues, and contributions to the program goals, Performers will be required to provide live, and interactive technology demonstrations, as appropriate.



### **1.H.3. Technical Status Meetings**

The PM will be in frequent communication, in person or by teleconference, with Performers including both Prime and Subcontractors. Offerors should plan for monthly teleconference calls of one hour in duration with their technical staff present to answer questions regarding the state of their research. The frequency of these calls may change at the discretion of the IARPA PM.

### **1.I. Place of Performance**

Performance will be conducted at the Performers' sites, except for the tests at the end of each phase, which will occur at IARPA established testing sites.

### **1.J. Period of Performance**

The SMART ePANTS program is envisioned as a 42-month effort that is intended to begin January 2023. Phase I – Base Period of the program will last 18 months; Phase II – Option Period 1 will last 12 months; and Phase III – Option Period 2 will last 12 months.

## **2. AWARD INFORMATION:**

The BAA shall result in awards for all Phases of the program. Exercise of the Option Periods shall depend upon performance during Phase I - Base Period and subsequent Option Periods, as well as program goals, the availability of funding, and IARPA priorities. Exercising of Phases II – Option Period 1 and Phase III-Option Period II is at the sole discretion of the Government.

Multiple awards are anticipated. Financial resources made available under this BAA shall depend on the quality of the proposals received and the availability of funds. Multiple awards to the same Offeror are acceptable provided the proposed techniques are distinct and the proposed personnel are sufficiently different to achieve the necessary level of effort to complete the work.

The Government reserves the right to select for negotiation all, some, one, or none of the proposals received in response to this solicitation and to make awards without discussions with Offerors. The Government also reserves the right to conduct discussions if determined to be necessary. Additionally, the Government reserves the right to accept proposals in their entirety or to select only portions of proposals for negotiations for award. Evaluation and award of proposals will follow FAR 35 processes as described herein.

Awards under this BAA shall be made to Offerors based on the Evaluation Factors listed in Section 5 of the BAA, as well as successful completion of negotiations. Proposals selected for negotiation may only result in a procurement contract.

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

## **3. ELIGIBILITY INFORMATION:**

### **3.A. Eligible Applicants**

All responsible sources capable of satisfying the Government's needs may submit a proposal. Historically Black Colleges and Universities, Small Businesses, Small Disadvantaged Businesses and Minority Institutions are encouraged to submit proposals and team with others to submit proposals; however, no portion of this announcement shall be set aside for these organizations' participation due to the impracticality of reserving discrete or severable areas for exclusive competition among these entities. Other Government Agencies, Federally Funded Research and

Development Centers, University Affiliated Research Centers, Government-Owned, Contractor-Operated facilities, Government Military Academies, and any other similar type of organization<sup>7</sup> that has a special relationship with the Government, that gives them access to privileged and/or proprietary information or access to Government equipment or real property, are not eligible to submit proposals under this BAA or participate as team members under proposals submitted by eligible entities. An entity of which only a portion has been designated as a UARC may be eligible to submit a proposal or participate as a team member subject to an organizational conflict of interest review.

Foreign entities and/or individuals may propose, even as the prime contractor. However, all foreign participation must comply with any necessary Non-Disclosure Agreements, Security Regulations, Export Control Laws, and other governing statutes applicable under the circumstances. Offerors are expected to ensure that participants do not either directly or indirectly compromise the laws of the United States, nor its security interests. As such, both foreign and domestic Offerors should carefully consider the roles and responsibilities of foreign participants as they pursue teaming arrangements.

### **3.A.1 Organizational Conflicts of Interest (OCI)**

According to FAR 2.101 “Organizational Conflict of Interest” means that because of other activities or relationships with other persons, a person is unable or potentially unable to render impartial assistance or advice to the Government, or the person’s objectivity in performing the contract work is or might be otherwise impaired, or a person has an unfair competitive advantage.

In accordance with FAR 9.5, Offerors are required to identify and disclose all facts relevant to potential OCIs involving the Offeror’s organization and any proposed team member (sub awardee, consultant). Under this Section, the Offeror is responsible for providing this disclosure with each proposal submitted pursuant to the BAA. The disclosure must include the Offeror’s, and as applicable, proposed team member’s OCI mitigation plan. The OCI mitigation plan must include a description of the actions the Offeror has taken, or intends to take, to prevent the existence of conflicting roles that might bias the Offeror’s judgment and to prevent the Offeror from having an 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.

IARPA generally 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, address whether an Offeror or an Offeror’s team member (e.g., sub awardee, consultant) is providing SETA, A&AS, or similar support (e.g., T&E services) to IARPA under: (a) a current award or subaward; or (b) a past award or subaward.

If SETA, A&AS, or similar support is or was being provided to IARPA, the proposal must include:

- The name of the IARPA program or office receiving the support;
- The prime contract number.
- Identification of proposed team member (sub awardee, consultant) providing the support.

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<sup>7</sup> There are instances when these types of entities provide a unique facility, specialized equipment or technical service that is not otherwise obtainable. In such cases, Offerors can request use and the Government will determine if the resource can be made available to all Offerors as Government Furnished Property / Equipment/Information / / Capability / Service. If the resource requested cannot be provided directly by the Government, the Government may consider an Offeror’s request for limited use as a procured service not otherwise available only after an OCI review and determination. It is advised that the Offeror have an alternate plan in its proposal in case the Government does not accept the proposed participation. Requests for such resources can be submitted during the Q&A period.

As part of their proposal, Offerors shall include either (a) a copy of their OCI notification including mitigation plan or (b) a written certification that neither they nor their subcontractor teammates have any potential conflicts of interest, real or perceived. A sample certification is provided in Appendix A.

The Government will evaluate OCIs and potential OCIs to determine whether they can be avoided, neutralized, or mitigated and/or whether it is in the Government's interest to grant a waiver. The Government will make OCI determinations, as applicable, for proposals that are otherwise selectable under the BAA Evaluation Factors.

The Government may require Offerors to provide additional information to assist the Government in evaluating OCIs and OCI mitigation plans. If a prospective Offeror believes that any conflict of interest exists or may exist (whether organizational or otherwise), the Offeror should promptly raise the issue with the Government by sending his/her contact information and a summary of the potential conflict by e-mail to the Agency Contact identified herein, before time and effort are expended in preparing a proposal and mitigation plan.

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

### **3.A.2 Multiple Submissions to the BAA**

Organizations may participate as a prime or subcontractor in more than one submission to the BAA. However, if multiple submissions to the BAA which include a common team member are selected, such common team members shall not receive duplicative funding (i.e., no one entity can be paid twice to perform the same task).

### **3.B. U.S. Academic Institutions**

According to Executive Order 12333, as amended, paragraph 2.7, "Elements of the Intelligence Community are authorized to enter into contracts or arrangements for the provision of goods or services with private companies or institutions in the United States and need not reveal the sponsorship of such contracts or arrangements for authorized intelligence purposes. Contracts or arrangements with academic institutions may be undertaken only with the consent of appropriate officials of the institution."

Offerors must submit a completed and signed Academic Institution Acknowledgement Letter for each U.S. academic institution that is a part of their team, whether the academic institution is serving in the role of a prime, or a subcontractor or a consultant at any tier of their team with their technical proposal. Each Letter must be signed by a senior official from the institution (e.g., President, Chancellor, Provost, or other appropriately designated official). A template of the Academic Institution Acknowledgement Letter is enclosed in APPENDIX A of this BAA. Note that the Government shall not enter into negotiations with an Offeror whose team includes a U.S. academic institution until all required Academic Institution Acknowledgment Letters are received.

### **3.C. Other Eligibility Criteria**

#### **3.C.1 Collaboration Efforts**

Collaborative efforts and teaming arrangements among potential Offerors are strongly encouraged. Specific content, communications, networking, and team formations are the sole responsibility of the participants.

## **4. APPLICATION AND SUBMISSION INFORMATION:**

This notice constitutes the total BAA and contains all information required to submit a proposal. No additional forms, kits, or other materials are required.

#### **4.A. Proposal Information**

Interested Offerors are required to submit full proposals (Volume I, initially and Volume 2, if requested) in order to receive consideration for award. Compliant proposals shall be received by the time and date specified in the BAA, General Information, item 7.2, Proposal Due Date for Initial Round of Selections, in order to be considered in the initial round. It is within the Government's sole discretion whether to evaluate any proposals received after this date but prior to the BAA Closing Date set forth in General Information, item 7.3. Selection for award remains contingent on the technical and funding availability evaluation factors. Proposals received after the BAA Closing Date are deemed to be late and will not be evaluated.

The Government intends to use Booz Allen Hamilton, AirIn Technologies Inc., Bluemont Technology & Research, Crimson Government Solutions, Everwatch, FedData, Patriot Solutions Group, Inc., SAIC, and The Infusement Group, LLC regarding portions of the proposals submitted to the Government and/or to provide logistical support in carrying out the evaluation process.

In addition to supporting evaluations, the following entities: the Naval Information Warfare Center (NIWC) (San Diego, CA), the Air Force Research Laboratory (AFRL) (Dayton, Ohio), and the Massachusetts Institute of Technology, Lincoln Laboratory (MITLL) (Lexington, MA) may be supporting T&E activities or consulting for contracts awarded under this program and should also be considered as part of an Offeror's OCI disclosure.

All Government and Contractor personnel shall have signed and be subject to the terms and conditions of non-disclosure agreements. By submission of its proposal, an Offeror agrees that its proposal information may be disclosed to employees of these organizations for the limited purposes stated above. Offerors who object to this arrangement shall provide clear notice of their objection as part of their transmittal letter. If Offerors do not send notice of objection to this arrangement in their transmittal letter, the Government shall assume consent to the use of contractor support personnel in assisting the review of submittal(s) under this BAA.

Only Government personnel will make evaluation and award determinations under this BAA.

All administrative correspondence and questions regarding this solicitation shall be directed by email to [dni-iarpa-smart-epants@iarpa.gov](mailto:dni-iarpa-smart-epants@iarpa.gov). Proposals shall be submitted in accordance with the procedures stated in the BAA.

#### **4.B. Proposal Format and Content**

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

All proposals shall be in the format given below. Non-compliant proposals may be rejected without review. Proposals shall consist of "Volume 1 - Technical and Management Proposal" and, only if requested (see BAA sections 4.B.2 and 5.B.), "Volume 2 - Cost Proposal." All proposals shall be written in English.

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

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

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

**Volume 1 – Technical & Management Proposal (See Section 4.B.1 below)**

Section 1 - Cover Sheet (see Appendix A) & Transmittal Letter (not included in page count)

Section 2 – Summary of Proposal

Section 3 – Detailed Proposal

Section 4 – Attachments (Not included in page count, but number appropriately for elements included. Templates are in the Appendices of this BAA)

1 – Academic Institution Acknowledgment Letter, if required

2 – IP Rights, estimated not to exceed 4 pages

3 – OCI Notification or Certification

4 – Bibliography

5 – Relevant Papers (up to three)

6 – Consultant Letters of Commitment

7 – Human Use Documentation (see Section 6) - **Not applicable**

8 – Animal Use Documentation (see Section 6) - **Not applicable**

9 – A Three Chart Summary of the Proposal

10 – Security Plan, estimated not to exceed 5 pages - **Not applicable**

11 – Research Data Management Plan, estimated not to exceed 3 pages (see Section 4 and Template under Appendix A)

~~12 – Privacy Plan, (See Section 1.D.3), no page limit~~

**Volume 2 – Cost Proposal**

**(To be submitted only upon request of the Contracting Officer, See BAA Sections 4.B.2 and 5.B)**

Section 1 – Cover Sheet (see Appendix B)

Section 2 – Estimated Cost Breakdown

Section 3 – Supporting Information

**4.B.1 Volume 1: Technical and Management Proposal**

Volume 1, Technical and Management Proposal, may include an attached bibliography of relevant technical papers or research notes (published and unpublished) which document the technical ideas and approach on which the proposal is based. Copies of not more than three relevant papers can be included with the submission. Other supporting materials will not be reviewed. For purposes of page limit determination only, Offerors may propose to four research tracks, including Track 1, 2a, 2b, and 3. Except for the cover sheet, transmittal letter, table of contents (optional), and the required attachments stated in the BAA the allowable page limits are as follows:

- **Not to exceed 20 pages if only one Track is proposed**
- **Not to exceed 30 pages if two or more Tracks are proposed**
- **Not to exceed 40 pages if three or more Tracks are proposed**
- **Not to exceed 50 pages if all four Tracks are proposed**

Any pages exceeding these limits will not be considered during the evaluation process. Proposals shall be accompanied by an official transmittal letter, using contractor format.

#### **4.B.1.a Section 1: Cover Sheet & Transmittal Letter**

- A. Cover sheet: (See Appendix A for template)
- B. Transmittal Letter

The transmittal letter shall include the following (**not to exceed one page**):

Introduction of Offeror and team (subcontractors and consultants), the BAA number, IARPA program name, Offerors' Program name, the proposal validity period, the type contract vehicle being requested (procurement contract or other transaction) with a short rationale, any non-negotiable conditions on which the offer is based such as contract type (cost type, FFP), IP restrictions, etc., and the Offeror's points of contact information including: name, email and phone number for both technical and administrative issues.

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

#### **4.B.1.b Section 2: Summary of Proposal (see below for page limit)**

Section 2 shall provide an overview of the proposed work as well as introduce associated technical and management issues. This section shall contain a technical description of technical approach to the research as well as a succinct portrayal of the uniqueness and benefits of the proposed work. It shall make the technical objectives clear and quantifiable and shall provide a project schedule with definite decision points and endpoints.

- **Not to exceed 5 pages**

The Summary shall include the elements specified in the sections below:

- A. A technical overview of the proposed research and plan. This section is the centerpiece of the proposal and shall succinctly describe the proposed approach and research. The overview shall clearly articulate the approach and design, technical rationale, and constructive plan for accomplishment of technical objectives and deliverable production. The approach will be supported by basic, clear calculations. Additionally, proposals shall clearly explain the innovative claims and technical approaches that will be employed to meet or exceed each program metric along with an explanation outlining why the proposed approaches are feasible. Proposals must also clearly identify any technical uncertainties and potential mitigations. The use of non-standard terms and acronyms should be avoided. This section shall be supplemented with a more detailed plan in Volume 1, Section 3 of the proposal.
- B. Summary of the products, transferable technology and deliverables associated with the proposed research results. Define measurable deliverables that show progress toward achieving the stated program milestones. All proprietary claims to the results, prototypes, IP, or systems supporting and/or necessary for the use of the research, results, and/or prototype shall be detailed in Attachment 2. Should no proprietary claims be identified in Attachment 2, Government rights shall be unlimited to all technology and deliverables resulting from or delivered under this BAA.
- C. Schedule and milestones for the proposed research. Summarize, in table form the schedule and milestones for the proposed research. Do not include proprietary information with the milestone chart.
- D. Related research. Include a general discussion of other research in this area, comparing the significance and plausibility of the proposed innovations against competitive approaches to achieve Program objectives.

Project contributors. Include a clearly defined organizational chart of all anticipated project participants and affiliations (e.g. subcontractor, consultant), organized under functional roles for the effort, along with the associated task number responsibilities for each individual.

E. Technical Resource Summary: (NOTE: The full Cost Volume **is not** required unless requested by the Contracting Officer; therefore, it is critical that Offerors address the items below in their **technical proposal** so the Government can evaluate Resource Realism.)

- Summarize the total level of effort by labor category/technical discipline (e.g., research scientist/chemist/physicist/engineer/administrative) and affiliation (e.g., prime/ subcontractor/consultant). All Key Personnel and significant contributors shall be identified by name. Provide a brief description of the qualifications for each labor category/technical discipline (e.g., education, certifications, years of experience).
- Summarize level of effort by labor category/technical discipline for each major task.
- Identify software and IP required for performance, by affiliation. List each item separately, identifying the task number for which the software or IP is required and the Performer team requiring it.
- Identify materials or equipment (such as IT) required for performance. List each item separately, identifying the task number for which the material or equipment is required and the Performer team requiring it.
- Identify any other resources required to perform (e.g., services, data sets, data set repository, facilities, Government furnished property. List each item separately, identifying the task number for these other resources are required and the Performer team requiring it.
- Estimated travel, including purpose of travel and number of personnel per trip, by affiliation. (See Appendix B.4 for sample template)

The above information shall cross reference to the tasks set forth in the Offeror's statement of work and shall be supported by the detailed cost and pricing information provided in the Offeror's Volume 2 Cost Proposal, the latter of which shall be submitted only if requested.

#### **4.B.1.c. Section 3: Detailed Proposal Information**

This section of the proposal shall provide the detailed, in-depth discussion of the proposed research as well as supporting information about the Offeror's capabilities and resources. Specific attention shall be given to addressing both the risks and payoffs of the proposed research and why the proposed research will achieve the goals, objectives, metrics, and milestones in this BAA. The Government reserves the right to reject a proposal if the information requested below is not adequately addressed. This part shall provide:

- A. Statement of Work (SOW) - Clearly define the technical tasks and sub-tasks to be performed, their durations and the dependencies among them. For each task and sub-task, provide:
- A general description of the objective;
  - A detailed description of the approach to be taken, developed in an orderly progression and in enough detail to establish the feasibility of accomplishing the goals of the task;
  - Identification of the primary organization responsible for task execution (prime, sub- contractor, team member, etc.) by name;
  - The exit criteria for each task/activity (i.e., a product, event or milestone that defines its completion); and
  - Definition of all deliverables (e.g., data rights, reports, software) to be provided to the Government.

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

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

- B. A detailed description of the objectives, scientific relevance, technical approach and expected significance of the work. Clearly identify the key elements of the proposed work and how they relate to each other. Describe the technical methods or approaches that will be used to meet or exceed each program milestone along with an explanation outlining why the proposed methods/approaches are feasible. Additionally, describe any anticipated risks along with possible mitigations. Proposals containing only a general discussion of the problem without detailed description of approaches, plausibility of implementation, and critical metrics may be deemed not selectable.
- C. State-of-the-art. Compare with the proposed approach to other on-going research, highlighting the uniqueness of the proposed approach and differences between the proposed effort and the current state-of-the-art. Identify advantages and disadvantages of the proposed work with respect to potential alternative approaches.
- D. Data sources. Identify and describe data sources to be utilized in pursuit of the stated research goals.

Offerors proposing to use existing data sets shall provide written verification that said data sets were obtained in accordance with U.S. laws and, where applicable, use will be in compliance with End User License Agreements, Copyright Laws, Terms of Service, and laws and policies regarding privacy protection of U.S. Persons. Offerors proposing to obtain new data sets shall ensure that their plan for obtaining the data complies with U.S. Laws and, where applicable, with End User License Agreement, Copyright Laws, Terms of Service, and laws and policies regarding privacy protection of U.S. Persons. Offerors shall also address IP restrictions on the use or transfer of such data sets, in Attachment 2 of the Offeror's proposal, as described in Section 4.B.1.d.

Offerors shall also include the documentation required in 6.B. (Human Use).

Documentation must be well written and logical; claims for exemptions from Federal regulations for human subject protection must be accompanied by a strong defense of the claims. The Human Use documentation and the written verification are not included in the total page count.

- E. Deliverables. Based on the required deliverables identified in Section 1 of the BAA, clearly identify the hardware and data to be delivered, including technical data and computer software. In Attachment 2 to Offeror's proposal, Offerors shall address IP rights in such data, as described in Section 4.B.1.d.
- F. Cost, schedule, milestones. Describe the cost, schedule, and milestones for the proposed research, including cost estimates by cost element for base period, the option period(s) and the total program summary, and company cost share, if any, as well as, costs by technical area(s) and tasks (see tables below for sample format). The milestones shall not include proprietary information (Offeror can use their own format for milestones).

**(Note: The full Volume 2 - Cost Proposal is not required unless requested by the CO; therefore, it is critical that Offerors address this element in their technical proposal so the Government can evaluate funding availability. See BAA Sections 4.B.2, 5.A., and 5.B).**



**SAMPLE FORMAT**

<b>Cost Element (burdened)</b>	<b>Phase 1- Base (18 Months)</b>	<b>Phase 2 -Option 1 (12 Months)</b>	<b>Phase 3 – Option 2 (12 Months)</b>	<b>Total Program Summary</b>
Labor				
Subcontracts/Consultant				
Materials & Equipment				
Travel				
Other Direct Costs				
(Cost Share, if any)				
Total				

G. Offeror’s previous accomplishments. Discuss previous accomplishments and work in this or closely related research areas and how these will contribute to and influence the current work.

H. Facilities. Describe the facilities that shall be used for the proposed effort, including computational and experimental resources.

I. Detailed Management Plan. Provide the Management Plan that clearly identifies both organizations and individuals within organizations that make up the team, and delineate the expected duties, relevant capabilities, and task responsibilities of team members and expected relationships among team members. Identify the expected levels of effort (percentage time, or fraction of an FTE) for all Key Personnel and significant contributors. Additionally, include a description of the technical, administrative, and business structure of the team along with an internal communications plan. Describe project/function/sub-contractor relationships (including formal teaming agreements), Government research interfaces, and planning, scheduling, and control practices utilized, as well as the team leadership structure. Provide a brief biography of all Key Personnel (including alternates, if desired) and significant contributors who shall be involved in the research along with the amount of effort to be expended by each person during the year. Participation by all Key Personnel and significant contributors is expected to exceed 25% of their time. A compelling explanation is required for any variation from this figure.

If the team intends to use consultants, they shall also be included in the organizational chart with an indication of whether the person shall be an “individual” or “organizational” consultant (i.e., representing themselves or their organization), and organizational affiliation.

See Table 4 below for the recommended format.

**Table 4: Team Organization (Example) \* if applicable**

<b>Participants</b>	<b>Org</b>	<b>Role</b>	<b>Unique, Relevant Capabilities</b>	<b>Role: Tasks</b>	<b>Clearance Level *</b>	<b>Time</b>
Jane Wake	LMN Univ.	PI/Key Personnel	Electrical Engineering	Program Mgr & Electronics: 10		100%
John Weck, Jr.	OPQ Univ.	Key Personnel	Mathematical Physics	Programming: 1-5		50%
Dan Wind	RST Univ.	Key Personnel	Physics	Design, Fab, and Integration: 6-8		90%
Katie Wool	UVW Univ.	Contributor	Quantum Physics	Enhancement witness design: 4		25%
Rachel Wade	XYZ Corp.	Co-PI/Key Personnel	Graph theory	Architecture design: 6		55%

Participants	Org	Role	Unique, Relevant Capabilities	Role: Tasks	Clearance Level *	Time
Chris West	XYZ Corp.	Significant Contributor	EE & Signal Processing	Implementation & Testing: 8-9		60%
Julie Will	JW Cons.	Consultant (Individual)	Computer science	Interface design: 10		200 hours
David Word	A Corp.	Consultant (A. Corp.)	Operations Research	Applications Programming: 2-3		200 hours

- J. Resource Share. Include the type of support, if any, the Offeror might request from the Government, such as facilities, equipment, materials, or any such resources the Offeror is willing to provide at no additional cost to the Government to support the research effort. Cost sharing is not required from Offerors and is not an evaluation criterion but is encouraged where there is a reasonable probability of a potential commercial application related to the proposed research and development effort.
- K. The names of other federal, state, or local agencies or other parties receiving the proposal and/or funding the proposed effort. If none, so state. Concurrent submission of the proposal to other organizations will not prejudice its review but may impact IARPA’s decision to fund the effort. See 5.A.2.a.
- L. Research Data Management Plan. (RDMP). Submit a RDMP that outlines how they will manage and preserve the Research Data, as defined below, collected, or produced through the course of performance. The RDMP need not require the preservation of all Research Data: Offerors shall consider the cost and benefits of managing and preserving the Research Data in determining whether to preserve it. At a minimum, all Research Data associated with a peer-reviewed manuscript or final published article (hereinafter “Publications”) must be made publicly accessible by the award recipient before, on or at a reasonable time after the publication date. The Publications whose associated data must be covered by the RDMP are deliverables as described in Section 1.

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

The RDMP must address the following:

- Describe the types of Research Data collected or produced in the course of the project. Include standards to be used for Research Data and metadata content and format.
- A plan for making the Research Data that underlie Publications digitally accessible to the public before or, at the time of publication or conference presentation, or within a reasonable time after publication. The requirement could be met by including the data as supplementary information to the Publication or by depositing the Research Data in a searchable, machine-readable, and digitally accessible form suitable for repositories available to the public free of charge. Such repositories could be discipline-specific repositories, general purpose research data repositories or institutional repositories. The published article or conference paper should indicate how the public may access Research Data underlying the paper’s results and findings. Offerors should attempt to make the Research Data available for at least three years after published article or conference. (NOTE: Offerors shall make a best effort in identifying research data sets that may be used for Publications that occur after contract end. The Offeror shall deliver these data sets to the Government and make them available in repositories available to the public prior to the end of the period of performance, if not included as supplementary information to Publications.)
- Policies and provisions for sharing and preservation, including a) policies and provisions for appropriate protection of privacy, confidentiality, security, and IP, b) descriptions of tools, including software,

needed to access and interpret the Research Data, and c) policies and provisions for re-use, re-distribution, and production of derivatives.

- If, for legitimate reasons (e.g., privacy, confidentiality, security, IP rights considerations; size of data sets, cost; time), the Research Data underlying the results of peer-reviewed publications or conference papers cannot be shared and preserved, the plan must include a justification citing such reasons.

In addressing these elements (e.g., types of data to be shared and preserved, standards to be used for data and metadata, repositories to be used for archiving data, timeframes for sharing and preservation), the RDMP should reflect the best practices of the relevant scientific discipline and research community. At a minimum, Research Data underlying Publications and associated metadata shall include an acknowledgement of IARPA support and a link to the associated Publication.

#### **4.B.1.d. Section 4: Attachments**

[NOTE: The attachments listed below shall be included with the proposal, if applicable, but do not count against the Volume 1-page limit.]

Attachment 1: Signed Academic Institution Acknowledgement Letter(s) (if applicable). A template is provided in Appendix A.

Attachment 2: IP Rights. A template is provided in Appendix A. This attachment is estimated not to exceed 4 pages and shall address the following:

Representation as to Rights. An Offeror shall provide a good faith representation that they either own or have sufficient licensing rights to all IP that will be utilized under their proposal.

Program-Specific IP Approach. IARPA requires sufficient rights to IP developed or used in the conduct of the proposed research to ensure that IARPA can successfully (a) manage the program and evaluate the technical output and deliverables, (b) communicate program information across Government organizations, and (c) support transition to and further use and development of the program results by Intelligence community (IC) users and others. IARPA anticipates that achieving these goals for the SMART EPANTS program may necessitate a minimum of Unlimited Rights in all deliverables. However, there may be any number of other approaches to intellectual property rights to achieve IARPA's program goals. "Unlimited rights" means the rights of the Government to use, disclose, reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, in any manner and for any purpose, and to have or permit others to do so. In addressing their approach to IP rights, Offerors should (1) describe the intended use of patented invention(s) or data, including, technical data and computer software, in the conduct of the proposed research; (2) describe the rights being offered to the Government along with a justification if less than Unlimited Rights is being offered; (3) explain how IARPA will be able to reach its program goals (including transition) with the rights offered to the Government; (4) identify the cost to the Government to acquire additional or alternative rights beyond those being offered, if applicable; and (5) provide possible alternatives in any area in which the offered rights may be insufficient for IARPA to achieve its program goals (e.g., the possibility of future licensing of privately-developed software to U.S. Government agencies at a reasonable cost.)

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

Government requests that Offerors further specify any rights offered to the Government for inventions that shall be utilized in the program (beyond the implied license that accompanies a patent owner's sale of a patented product).

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

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

Data Developed with Mixed Funding. If mixed funding is anticipated in data generated, developed, and/or delivered under the research effort, the Government seeks at minimum "Government Purpose Rights" (GPR) for all noncommercial data deliverables; offering anything less shall be considered a weakness in the proposal. United States Government purposes include any activity in which the United States Government is a party, including cooperative agreements with international or multi-national defense organizations, or sales or transfers by the United States Government to foreign governments or international organizations. Government purposes include competitive procurement, but do not include the rights to use, modify, reproduce, release, perform, display, or disclose technical data or computer software for commercial purposes or authorize others to do so. Government Purpose Rights continue for a five-year period upon execution of the contract, and upon expiration of the five-year period, the Government obtains Unlimited Rights in the data.

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

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

Definitions. For this solicitation, the Government recognizes only the definitions of IP rights in accordance with the terms as set forth in the Federal Acquisition Regulation (FAR) part 27, Defense Federal Acquisition Regulation Supplement (DFARS) part 227, or as defined herein. If Offerors propose IP rights that are not defined in FAR part 27, DFARS part 227, or herein, Offerors shall clearly define such rights in the "Intellectual Property Rights" Attachment of their proposal. Offerors are reminded of the requirement for prime contractors to acquire sufficient rights from subcontractors to accomplish the program goals.

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

Attachment 3: OCI Notification or Certification Template provided in Appendix A.

Attachment 4: Bibliography. A brief bibliography of relevant technical papers and research notes (published and unpublished) which document the technical ideas on which the proposal is based.

Attachment 5: Relevant Papers. Copies of not more than three relevant papers may be included in the submission. The Offerors shall include a one-page technical summary of each paper provided, suitable for individuals who are not experts in the field.

Attachment 6: Consultant Commitment Letters. If needed.

Attachment 7: Human Use Documentation, reference section 6.B. **Not applicable**

Attachment 8: Animal Use Documentation. **Not applicable**

Attachment 9: A Three Chart Summary of the Proposal. A PowerPoint summary that quickly and succinctly indicates the concept overview, key innovations, expected impact, and other unique aspects of the proposal. The format for the summary slides is included in Appendix A to this BAA and does not count against the page limit. Slide 1 should be a self-contained, intuitive description of the technical approach and performance. These slides may be used during the evaluation process to present a summary of the proposal from the Offeror's view.

Attachment 10: Security Plan. (Not to exceed 5 pages). **Not applicable**

Attachment 11: RDMP (estimated as 2 to 3 pages). Template provided in Appendix A.

~~Attachment 12: Privacy Plan, reference section 1.D.3 (No page limit)~~

#### **4.B.2. Volume 2: Cost Proposal (No Page Limit)**

**NOTE: This Volume is only required if the Offeror's proposal has been selected for negotiation (see BAA Section 5.B and 5.C). The notification of selection for negotiation will be issued in writing by the Contracting Officer and will include a request to submit the full Cost Volume within 10 business days or as otherwise authorized by the Contracting Officer.**

The Government anticipates awarding cost-type procurement contracts however, Offerors requesting other than a cost-type procurement contract (i.e., Firm Fixed Price (FFP) contract) may be directed by the Contracting Officer to provide "other than certified cost or pricing data" (reference FAR Part 15.4) and/or cost supporting information in a different format than described below. The Contracting Officer will determine whether to grant the request for other than a cost-type procurement contract. Examples of requests that would be considered for approval include those from non-traditional contractors such as commercial entities that do not accept FAR- based cost contracts, small businesses, start-up companies, consortia that may include universities and non-profits or foreign companies; where cost-sharing or government participation in the work is appropriate; where flexibility not available under a procurement contract is needed; or where commercialization by industry is deemed advantageous to the Government.

Regardless of the type of instrument determined to be appropriate by the CO, the Offeror's cost proposal shall contain sufficient information to establish the Offeror's understanding of the project, the perception of project risks, the ability to organize and perform the work and to support the realism and reasonableness of the proposed cost, to the extent appropriate. The Government recognizes that undue emphasis on cost may motivate Offerors to offer low-risk ideas with minimum uncertainty and to staff the effort with junior personnel to be in a more competitive posture. The Government discourages such cost strategies. Cost reduction approaches that shall be received favorably include innovative management concepts that maximize direct funding for technology and limit diversion of funds into overhead.

##### **4.B.2.a Section 1: Cover Sheet.**

See Appendix B for the Cover Sheet Template

#### 4.B.2.b. Section 2: Estimated Cost Breakdown.

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

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

#### 4.B.2.c. Section 3: Supporting Information

In addition to the above, supporting cost and pricing information shall be provided in sufficient detail to substantiate the Offeror's cost estimates. Include a description of the basis of estimate (BOE) in a narrative for each cost element and provide supporting documentation, as applicable:

Direct Labor – Provide a complete cost breakout by labor category, hours, and rates (template available in Appendix B). Specify all Key Personnel by name and clearly state their labor category and proposed rate. Describe the basis of the proposed rates and provide a copy of the most recent Forward Pricing Rate Agreement (FPRA) with the Government. If Offerors do not have a current FPRA with the Government, provide payroll records or contingency hire letters with salary data to support each proposed labor category, including those for key individuals, and the most recent Forward Pricing Rate Proposal Submission, if applicable. Offeror should also address whether any portion of their labor rates is attributable to uncompensated overtime.

Labor Escalation Factor – State the proposed escalation rate and the basis for that rate (e.g., based upon Global Insight indices, Cost Index, or historical data). If the escalation rate is based upon historical data, provide data to demonstrate the labor escalation trend. Provide a sample calculation demonstrating application of the factor to direct labor.

Subcontracts (to include consultants and Inter-organizational Transfers (IOTs) – The Offeror is responsible for compiling and providing full subcontractor proposals with the Cost Volume. Subcontractor cost element sheets shall be completed for the base period, each option period and the total summary using the same format required for the prime contractor (See Appendix B). Consultant letter(s) of commitment shall also be attached.

Information shall be presented in Excel with intact formulas using the format provided in Appendix B and addressing the supporting cost information as outlined in Section 4 of the BAA. In addition to the full and complete subcontractor cost proposals, the Offeror shall also provide its analysis of each subcontractor's proposal including justification for why the subcontractor was selected and its determination that the cost/price is fair and reasonable (Reference FAR Part 44 and FAR clause 52.244-2). **If subcontractors have concerns about proprietary cost information, subcontractors may submit their detailed cost proposals directly to the CO.**

Materials and Equipment – Provide copies of quotes, bill of materials, historical data or any other information including Offeror's analysis to support proposed costs.

Travel - The proposed travel supporting detail shall include destination and purpose of the trip, number of trips, number of travelers and days per trip and price per traveler in sufficient detail to verify the BOE. Proposed travel costs shall comply with the limitations set forth in FAR Part 31. (See Appendix B.4 for sample format).

Proposed conference travel must have an immediate, direct, and tangible benefit to the Government such as providing a deliverable at the conference (e.g., gives a presentation, presents a paper or research findings that are sponsored in whole or in part by IARPA). Travel for personnel to simply attend a conference will not be approved as a direct charge to the contract.

Other Direct Costs (ODCs) – ODCs shall be listed separately and supported by quotes, historical data or any other information including the Offeror’s analysis.

Indirect Costs – The Offeror shall show indirect cost calculations, identify the proposed indirect rate by contractor fiscal year and program period (base, option period) and provide information on indirect cost pools and allocation bases for each year and program period involved. If a Government agency recently audited the Offeror’s indirect rates, the Offeror shall identify the agency that conducted the audit, when the rates were approved and the period for which they are effective. Include a copy of this rate agreement. Absent current Government rate recommendations, it is incumbent on the Offeror to provide some other means of demonstrating indirect rate realism (e.g., 3 years of historical actual costs with applicable pools and bases). If proposed rates vary significantly from historical experience, the Offeror shall explain the variance.

Cost sharing – Describe the source, nature, and amount of cost-sharing, if any. Reference Resource Share from Section 4 of the BAA.

Other Pricing Assumptions – Identify all pricing assumptions, that should be incorporated into the resulting award instrument (e.g., use of Government Furnished Property/Facilities/Information, access to Government Subject Matter Experts, etc.). Reference Resource Share from Section 4 of the BAA.

Facilities Capital Cost of Money (FCCM) – If proposing FCCM, the Offeror shall show FCCM cost calculations, identify the proposed FCCM factors by contractor fiscal year and program year and provide a copy of the Forward Price Rate Agreement (FPRA), Forward Price Rate System (FPRS) or Forward Pricing Rate Recommendation (FPRR), if available.

Profit/Fee - Identify the proposed profit or fee percentage and the proposed profit/fee base. Provide justification for your proposed profit or fee.

Systems - For the systems listed below, provide a brief description of the cognizant federal agency and audit results. If the system has been determined inadequate, provide a short narrative describing the steps your organization has taken to address the inadequacies and the current status. If a formal audit has been performed by a Government Agency, please provide a complete copy of the audit report or adequacy determination letter. If the system has never received a formal Government review and approval include a statement to that effect. Address whether your organization has contracts that are Cost Accounting Standards (CAS) covered and if so, whether they are subject to full or modified CAS coverage.

- Accounting system
- Purchasing system

Certified “cost or pricing data” may be requested for procurement contract awards that exceed the threshold for submittal as set forth in the FAR, unless the Contracting Officer approves an exception from the requirement to submit cost or pricing data. (Reference FAR Part 15.403.)

#### **4.C. Submission Details**

##### **4.C.1. Due Dates**

See BAA General Information Section for proposal due dates and times.

#### 4.C.2. Proposal Delivery

Proposals (Volume 1 **initially**) shall be submitted electronically through the IARPA Distribution and Evaluation System (IDEAS). Offerors interested in providing a submission in response to this BAA shall first register by electronic means in accordance with the instructions provided on the following web site: <https://iarpa-ideas.gov>. Offerors who plan to submit proposals for evaluation are strongly encouraged to register at least one week prior to the due date for the first round of proposals. Offerors who do not register in advance do so at their own risk, and IARPA shall not extend the due date to accommodate such Offerors. Failure to register as stated shall prevent the Proposer's submittal of documents.

After registration has been approved, Offeror's should upload a proposal, (initially Volume 1 **only**), scanned certifications and permitted additional information in 'pdf' format, or as otherwise directed (Excel, PowerPoint, etc.). Offerors are responsible for ensuring a compliant and timely submission of their proposals to meet the BAA submittal deadlines. Time management to upload and submit is wholly the responsibility of the Offeror. **Note: IDEAS will require Offerors to complete a proposal cover sheet within IDEAS at the time that the Volume 1 – Technical and Management Proposal is submitted. This is separate and distinct from the Technical and Cost Volume cover sheets referenced in 4.B.1.a. and 4.B.2.a. and provided in Appendices A and B, respectively. Information requested within IDEAS will include basic cost information (Total funds requested from IARPA, proposed costs by option period and validity period). Please complete the requested information but DO NOT upload your Volume 2 – Cost Proposal. Directions for submittal of Volume 2 – Cost Proposal will be provided by the CO when Offerors are notified of selection for negotiations.**

Upon completing the proposal submission, the Offeror shall receive an automated confirmation email from IDEAS. Please forward that automated message to [dni-iarpa-smart-epants@iarpa.gov](mailto:dni-iarpa-smart-epants@iarpa.gov). IARPA strongly suggests that the Offeror document the submission of their proposal package by printing the electronic receipt (time and date stamped) that appears on the final screen following compliant submission of a proposal to the IDEAS website.

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

Volume 1 shall be submitted by the date and time specified in the BAA, Overview section, Proposal Due Date for Initial Round of Selections, in order to be considered in the initial round. It is in IARPA's sole discretion whether to evaluate proposals received after this date but before the BAA Closing Date set forth in the Overview Section. Selection remains contingent on the technical and funding availability evaluation factors. Proposals received after the BAA Closing Date are deemed to be late and will not be reviewed. Failure to comply with the submission procedures may result in the submittal not being evaluated.

Although classified proposals are not anticipated for this program, if an offeror chooses to submit a classified proposal, the offeror must first contact IARPA via [dni-iarpa-smart-epants@iarpa.gov](mailto:dni-iarpa-smart-epants@iarpa.gov) for detailed submittal instructions. In no case shall classified information be uploaded into IDEAS.

Classified proposals are not anticipated for this program. In no case shall classified information be uploaded into e-Commerce.

#### 4.D. Funding Restrictions

Facility construction costs are not allowable under this activity. Funding may not be used to pay for commercialization of technology.

### 5. **PROPOSAL REVIEW INFORMATION:**

#### 5.A. **Technical and Funding Availability Evaluation Factors**



The factors used to evaluate and select proposals for negotiation for this Program BAA are described in the following paragraphs. Because there is no common SOW, each proposal shall be evaluated on its own merits and its relevance to the Program goals rather than against other proposals submitted in response to this BAA. The proposals shall be evaluated based on technical and funding availability factors. These are of equal importance. Within the technical evaluation factor, the specific technical criteria are in descending order of importance, as follows: Overall Scientific and Technical Merit, Effectiveness of Proposed Work Plan, Contribution and Relevance to the IARPA Mission and Program Goal, Relevant Experience and Expertise, and Resource Realism. Specifics about the evaluation criteria are provided below.

Award(s) shall be made to an Offeror based on the technical and funding availability factors listed below, and subject to successful negotiations with the Government. Award shall not be made to Offeror(s) whose proposal(s) are determined not to be selectable. Offerors are cautioned that failure to follow submittal instructions may negatively impact their proposal evaluation or may result in rejection of the proposal for non-compliance.

#### **5.A.1. Technical Evaluation Factor (technical criteria listed below)**

##### **5.A.1.a. Overall Scientific and Technical Merit**

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

##### **5.A.1.b. Effectiveness of Proposed Work Plan**

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

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

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

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

##### **5.A.1.c. Contribution and Relevance to the IARPA Mission and Program Goal**

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

The Offeror's proposed IP and data rights are consistent with the Government's need to be able to effectively manage the program and evaluate the technical output and deliverables, communicate program information across Government organizations and support transition to and further use and development of the program results by IC users and others at a reasonable cost that is acceptable to the Government. The proposed approach to IP rights is in the Government's best interest.

#### **5.A.1.d Relevant Experience and Expertise**

The Offeror's capabilities, related experience, facilities, techniques, or unique combination of these, which are integral factors for achieving the proposal's objectives, shall be evaluated, as well as qualifications, capabilities, and experience of all Key Personnel and significant contributors critical in achieving the program objectives.

#### **5.A.1.e Resource Realism**

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

#### **5.A.2. Funding Availability Factor**

##### **5.A.2.a. Budget Constraints**

The Government will seek to maximize the likelihood of meeting program objectives within program budget constraints. This may involve awarding one or more contracts. **Note:** If the Offeror has submitted the proposal to other federal, state, or local agencies or other parties that may fund the proposed effort, it may impact the Government's decision to fund the effort.

##### **5.A.2.b. Program Balance**

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

#### **5.B. Method of Evaluation and Selection Process**

The Government will conduct an impartial, equitable, comprehensive proposal reviews and selects the source (or sources) whose offer meets the Government's technical, policy and programmatic goals. For evaluation purposes, a proposal is the document described in Section 4 of the BAA. Other supporting or background materials submitted with the proposal shall not be considered.

The contract award process for this BAA has two steps. The first step is selection for negotiations and is made based on review of the technical and funding availability factors (See BAA Section 5.A.). The second step is negotiation and contract award. Contract award is contingent on Contracting Officer determination of a fair and reasonable cost/price and agreement on terms and conditions.

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

Proposals will be reviewed individually and will not be reviewed against each other as they are not submitted in accordance with a common SOW. When SRP reviews are complete, the PM will prepare a recommendation to the

IARPA Scientific Review Official (SRO) identifying proposals as selectable, selectable with modification, or not selectable based on consideration of all stated factors (technical and funding availability factors). The SRO will make the final decision as to selectability for negotiations. At this point, Offerors will be notified in writing as to whether they have been determined selectable, selectable with modification, or not selectable.

### **5.C. Negotiation and Contract Award**

After selection and before award, the Government will contact Offerors whose proposals were selected or selected with modifications to engage in negotiations. At that time, the Government will also request a full cost proposal, as described in BAA Section 4.B.2. The Government will review the cost proposal using the proposal analysis techniques described in FAR 15.404-1, as appropriate, to determine a fair and reasonable cost. The Government's evaluation will include review of proposed anticipated costs/prices of the Proposer and those of associate, participating organizations, to ensure the Offeror has fully analyzed the budget requirements, provided sufficient supporting information, has adequate systems for managing the contract (accounting, purchasing), and that data is traceable and reconcilable. The Government will also determine whether the prospective contractor meets the responsibility standards of FAR Section 9.104. Additional information and supporting data may be requested.

If proposed costs submitted are substantially different than the estimates provided in the technical proposal, then a contract may not be awarded.

Procurement contracts, as determined by the contracting officer, shall be awarded to those Offerors whose proposals are deemed most advantageous to the Government, all stated evaluation factors considered, and pending the successful conclusion of negotiations.

### **5.D. Proposal Retention**

Proposals shall not be returned upon completion of the source selection process. The original of each proposal received shall be retained by the Government and all other non-required copies shall be destroyed. A certification of destruction may be requested, provided that the formal request is sent to the Government via e-mail to SMART ePANTS-BAASubmission-2021@iarpa.gov within 5 days after notification of proposal results.

## **6. AWARD ADMINISTRATION INFORMATION**

### **6.A. Award**

#### **6.A.1. Communications and Award Notices**

All questions or discussions regarding this solicitation must be directed to the Contracting Officer. All communication throughout this process must be handled formally and through the proper channels, which means all parties must ensure a Government Contract Specialist or Contracting Officer is present and/or engaged during any and all communication exchanges. Any informal communications or outside communication will delay and may also jeopardize a potential award.

As soon as practicable after the evaluation of a proposal is complete, the Offeror will be notified that: (1) its proposal has been selected for negotiations, or (2) its proposal has not been selected for negotiations.

#### **6.A.2. Types of Awards**

Procurement contracts will be made under this announcement. There are no limits on award amounts.

#### **6.A.3. Offer Preparation Reimbursement**

The Government provides no funding for direct reimbursement of proposal development costs.

#### **6.A.4. Obligating of the Government**

Prospective Offerors are advised that only Contracting Officers are legally authorized to commit the Government. Only Contracting Officers may obligate the Government to an agreement involving the expenditure of Government funds. Any resultant procurement contract award would include all clauses required by the FAR and appropriate supplements.

#### **6.A.5. Security Guidance**

Security classification guidance via a DD Form 254, "DoD Contract Security Classification Specification," will not be provided at this time since the Government is soliciting ideas only. After reviewing the incoming proposals, if a determination is made that the award instrument may result in access to classified information a DD Form 254 will be issued and attached as part of the award. Depending on the work to be performed, the Offeror may require a SECRET facility clearance and safeguarding capability; therefore, personnel identified for assignment to a classified effort must be cleared for access to SECRET information at the time of award. In addition, the Offeror may be required to have, or have access to, a certified and Government-approved facility to support work under this BAA.

#### **6.A.6. Proposal Handling**

The Government has contracted for various business and staff support services, some of which require contractors to obtain access to proprietary information submitted by Offerors. Any objection to access must be in writing to the Contracting Officer and shall include a detailed statement of the basis for the objection.

#### **6.A.7. Offer Markings**

All proposals containing proprietary data should have the cover page and each page containing proprietary data clearly marked as containing proprietary data. If only portions of the page contain proprietary information, those portions should be clearly marked. It is the Proposer's responsibility to clearly define to the Government what is considered proprietary data. No proposals containing classified information should be submitted under this announcement.

#### **6.A.8. Small Business Innovation Research (SBIR)**

Offerors may propose perform work that is a continuation of a previously awarded SBIR research project. However, Offerors shall not receive duplicative funding (i.e., no SBIR awardee may be paid twice to perform the same task).

### **6.B. Other Administrative Information**

#### **6.B.1. Export Control**

Offerors are warned that compliance with International Traffic in Arms Regulations (ITAR) may be required and will be included in all procurement contracts. The ITAR, issued by the Dept. of State, controls the export of defense-related articles and services, including technical data, ensuring compliance with the Arms Export Control Act (22 U.S.C. 2751 et seq.) If a Proposer has questions regarding how to comply with the ITAR, they are directed to look at DFARS 252.225-7048(c).

Offerors are also warned that compliance with the Export Administration Regulations (EAR) may be required and will be included in all procurement contracts. The EAR, issued by the Dept. of Commerce, controls the export of dual-use items, (items that have both commercial and military or proliferation applications) and purely commercial items. These items include commodities, software, and technology. Refer to the Commerce Control List, which is part of the EAR, to identify items subject to EAR, at <http://www.gpoaccess.gov/cfr/index.html> and [http://www.access.gpo.gov/bis/ear/ear\\_data.html](http://www.access.gpo.gov/bis/ear/ear_data.html).

The following clause, DFARS 252.225-7048 - Export-Controlled Items, will be included in awards as deemed appropriate:

(a) Definition. “Export-controlled items,” as used in this clause, means items subject to the Export Administration Regulations (EAR) (15 CFR Parts 730-774) or the International Traffic in Arms Regulations (ITAR) (22 CFR Parts 120-130). The term includes:

(1) “Defense items,” defined in the Arms Export Control Act, 22 U.S.C. 2778(j)(4)(A), as defense articles, defense services, and related technical data, and further defined in the ITAR, 22 CFR Part 120.

(2) “Items,” defined in the EAR as “commodities”, “software”, and “technology,” terms that are also defined in the EAR, 15 CFR 772.1.

(b) The Contractor shall comply with all applicable laws and regulations regarding export-controlled items, including, but not limited to, the requirement for contractors to register with the Department of State in accordance with the ITAR. The Contractor shall consult with the Department of State regarding any questions relating to compliance with the ITAR and shall consult with the Department of Commerce regarding any questions relating to compliance with the EAR.

(c) The Contractor's responsibility to comply with all applicable laws and regulations regarding export-controlled items exists independent of, and is not established or limited by, the information provided by this clause.

(d) Nothing in the terms of this contract adds, changes, supersedes, or waives any of the requirements of applicable Federal laws, Executive orders, and regulations, including but not limited to—

(1) The Export Administration Act of 1979, as amended (50 U.S.C. App. 2401, et seq.);

(2) The Arms Export Control Act (22 U.S.C. 2751, et seq.);

(3) The International Emergency Economic Powers Act (50 U.S.C. 1701, et seq.);

(4) The Export Administration Regulations (15 CFR Parts 730-774);

(5) The International Traffic in Arms Regulations (22 CFR Parts 120-130); and

(6) Executive Order 13222, as extended.

(e) The Contractor shall include the substance of this clause, including this paragraph (e), in all subcontracts.

## **6.B.2. Public Release**

It is the policy of the Department of Defense that the publication of products of fundamental research will remain unrestricted to the maximum extent possible. Research to be performed as a result of this BAA may be Fundamental. The Government does not anticipate applying publication restrictions of any kind but reserves the right to require prior review before publication in appropriate or required circumstances.

Offerors should note that pre-publication approval of certain information may be required if it is determined that its release may result in the disclosure of sensitive intelligence information.

A courtesy soft copy of any work submitted for publication shall be provided to the IARPA PM and the Contracting Officer Representative (COR) a minimum of 5 business days prior to release in any forum.

## **6.B.3. Electronic Systems**

### **6.B.3.a. System for Award Management (SAM)**

In accordance with FAR 52.204-7 and DFARS 252.204-7004, an Offeror must be actively registered in the System for Award Management. Selected Offerors not already registered in SAM will be required to register prior to any award under this BAA. FAR 52.204-7 System for Award Management and FAR 52.204-13 System for Award Management Maintenance are incorporated into this BAA, and FAR 52.204-13 will be incorporated in all awards. Information on SAM registration is available at <https://www.sam.gov/portal/public/SAM/>

### **6.B.3.b. Representations and Certifications**

In accordance with FAR 4.1201, prospective Proposers shall complete electronic annual representations and certifications at <https://www.sam.gov/portal/public/SAM/>

### **6.B.3.c. Invoicing, Receipt, Acceptance, and Property Transfer (iRAPT) (formerly Wide Area Work Flow (WAWF))**

Unless using another approved electronic invoicing system, Performers will be required to submit invoices for payment directly via the Internet/WAWF at <https://wawf.cb.mil>. Registration to iRAPT/WAWF will be required prior to any award under this BAA.

### **6.B.3.d. NAVWAR e-Commerce Central**

Proposal submissions for contracts will only be accepted via NAVWAR e-Commerce Central at <https://e-commerce.sscno.nmci.navy.mil>. (Note that this does not include a "www" prefix) by selecting NIWC Pacific then Open BAAs from the left-hand menu and selecting the Solicitation number.

### **6.B.4. Certificate of Current Cost and Pricing Data**

Upon completion of negotiations and agreement on contract cost, a Certificate of Current Cost or Pricing Data may be required in accordance with FAR 15.406-2. In addition, any Offeror who is required to submit and certify cost or pricing data shall certify on behalf of subcontractors.

### **6.B.5. Government Furnished Capabilities (GFC) and other Resources**

In the past, the SMART ePANTS T&E Team has developed certain unique capabilities and has purchased customized equipment using government funding for the purpose of making Active Smart Textiles. These capabilities and equipment are referred to as GFC in this BAA and are available for offerors to request in their proposals as an option. An overview of available GFC is available for viewing on the IARPA website in the MITLL presentation at <https://www.iarpa.gov/research-programs/smartepants>. An open house further describing GFC at MITLL will also be advertised on the same website.

GFCs which may be requested by offerors in their program application comprise the following:

- Filament Draw of thermally drawn polymer fibers containing wire buses
- Direct twist-to-ply production of custom yarns and fibers, including core wrapping
- Weaving of functional fiber & conductive yarns, channel weaving and multi-layered fabric weaving
- Knitting of functional textile with the following specialty equipment:
  - Stoll ADF Knit & Wear™ technology with a seamless weft knitting double bed 14gg/7.2 industrial machine
  - Shima Seiki Wholegarment™ technology seamless weft knitting double bed 10gg industrial accessory machine
  - Brother™ double handloom 7gg manual knitting machine
- Printing various AST-functional inks on fabrics
- Embroidery using conductive thread through-hole board attachment
- Soldering components onto a copper bus in polymer fiber
- AST custom packaging for textile applications
- Cut and sew expertise necessary to build ASTs with modern textile equipment
- Epoxy based component encapsulation for water resistance
- Use of certain MITLL-developed sensors and other backend electronics that have been offered as available to applicants to help them meet program metrics.

Offerors who wish to use these optional capabilities in their research shall request the specific GFC of interest in their proposal, stating which capabilities they would utilize and how it will assist in meeting the Government's requirement(s). During its source selection process, the Government reserves the right to partially fund proposals,

including any requested GFCs. Offerors who request the use of GFCs must include a signed letter from MITLL indicating that they understand the capabilities being requested, and that they are able to provide the capabilities requested in the offeror's proposal. This letter does not count towards page count of the technical proposal.

Questions regarding GFC capabilities may be addressed to [dni-smart-epants-te@iarpa.gov](mailto:dni-smart-epants-te@iarpa.gov). Answers to questions posed to the T&E team will be posted on the SMART ePANTS program website at <https://www.iarpa.gov/research-programs/smartepants> on the same date that the BAA Q&A period ends. Offerors shall not include the cost of GFC in their proposal.

### **GFC and Intellectual Property**

Offerors who request the use of GFC in their applications should be aware that the government is providing this capability for purposes of SMART ePANTS program research only. IARPA will not confer a license for offerors to use GFC for any other purpose.

### **The T&E Team and Application Selections**

The IARPA T&E team will NOT be members of the SMART ePANTS source selection panel.

### **Additional Contractual Requirements**

If an Offeror and the Government accepts an Offeror's proposal to use government resources in performance of an award (e.g., GFP, GFI, GFE, GFC etc.), the resultant award will include additional contractual requirements. The specific requirements will be determined for the individual award.

#### **6.B.6. Use of Arms, Ammunition and Explosives**

##### Safety

The Offeror is required to be in compliance with DoD manual 4145.26-M, DoD Contractor's Safety Manual for Ammunition and Explosives if ammunitions and/or explosives are to be utilized under the proposed research effort. (See DFARS 223.370-5 and DFARS 252.223-7002)

If ammunitions and/or explosives (A&E) are to be utilized under the proposed research effort, the Government requires a preaward safety survey in accordance with DFARS PGI 223.370-4(C)(iv) entitled Preaward survey. The Offeror is solely responsible for contacting the cognizant Defense Contract Management Agency (DCMA) office and obtaining a required preaward safety survey before proposal submission. The Offeror should include required preaward safety surveys with proposal submissions.

If the Offeror proposes that the Government provide Government-furnished A&E containing any nitrocellulose-based propellants and/or nitrate ester-based materials (such as nitroglycerin) or other similar A&E with a tendency to become chemically unstable over time, then NMCARS 5252.223-9000 will also apply to a resulting contract award. (See NMCARS 5223.370-5)

##### Security

If arms, ammunition, or explosives (AA&E) are to be utilized under the proposed research effort, the Government requires a preaward security survey. The Offeror is solely responsible for contacting the cognizant DCMA office and obtaining a required preaward security survey before proposal submission. The Offeror should include a required preaward security survey with proposal submission. (See DoD manual 5100.76-M, Physical Security of Sensitive Conventional Arms, Ammunition and Explosives, paragraph C1.3.1.4)

If AA&E are to be utilized under the proposed research effort, the Government may require the Contractor to have perimeter fencing around the place of performance in accordance with DoD 5100.76-M, Appendix 2.

If AA&E are to be utilized under the proposed research effort, the Offeror is required to provide a written copy of the Offeror's AA&E accountability procedures in accordance with DoD 5100.76-M. If the Offeror is required to provide

written AA&E accountability procedures, the Offeror should provide the respective procedures with its proposal submission. See DoD 5100.76-M Appendix 2.12.

#### **6.B.7. Employment Eligibility Verification (E-verify)**

As per FAR 22.1802, recipients of FAR-based procurement contracts must enroll as Federal Contractors in E-verify and use E-verify to verify employment eligibility of all employees assigned to the award. All resultant contracts from this solicitation will include FAR 52.222-54, "Employment Eligibility Verification."

#### **6.B.8. Reporting**

Fiscal and management responsibility are important to the Program. Although the number and types of reports shall be specified in the award document, all Offerors shall, at a minimum, provide the CO, COTR and PM with monthly technical reports and monthly financial reports. The reports shall be prepared and submitted in accordance with the procedures contained in the award document and mutually agreed upon before award. Technical reports shall describe technical highlights and accomplishments, priorities and plans, issues and concerns, evaluation results, and future plans. Financial reports shall present an on-going financial profile of the project, including total project funding, funds invoiced, funds received, funds expended during the preceding month, and planned expenditures over the remaining period. Additional reports and briefing material may also be required, as appropriate, to document progress in accomplishing program metrics.

The Offeror shall prepare and provide a research report of their work by month 18 for Phase 1, by month 12 for Phase 2, and month 12 for Phase 3. The reports shall be delivered to the CO, COTR and the PM. The reports shall include:

- Problem definition
- Findings and approach
- System design
- Possible generalization(s)
- Information on performance limitations and potential mitigation
- Anticipated path ahead
- Final identification of all commercial, third-party, or proprietary hardware, software, or technical data integrated into any deliverable and all applicable use restrictions.
- Any research products, including publications, data, and software, resulting from the project during the reporting period. The final report shall list in-progress scientific manuscripts and other research products.

#### **6.B.9. Human Use**

All research involving human subjects, to include use of human biological specimens and human data, selected for funding must comply with the federal regulations for human subject protection. Further, research involving human subjects that is conducted or supported by the DoD must comply with 32 CFR 219, Protection of Human Subjects ([http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title32/32cfr219\\_main\\_02.tpl](http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title32/32cfr219_main_02.tpl)), and DoD Directive 3216.02, Protection of Human Subjects and Adherence to Ethical Standards in DoD-Supported Research (<http://www.dtic.mil/whs/directives/corres/pdf/321602p.pdf>).

Institutions awarded funding for research involving human subjects must provide documentation of a current institutional Assurance of Compliance with Federal regulations for human subject protection and a DoD addendum to the Assurance. A Federal Wide Assurance example can be found at Department of Health and Human Services, Office of Human Research Protection (<http://www.hhs.gov/ohrp>). A DoD addendum can be obtained from Army, Navy, or Air Force offices. Information on DoD addendums can be found at (<http://www.onr.navy.mil/en/About-ONR/compliance-protections/Research-Protections/Research-Protection-Addendum-Assurance.aspx>). All institutions engaged in human subject research, to include subcontractors, must also have a valid Assurance. In addition, personnel involved in human subject research must provide documentation of completing appropriate training for the protection of human subjects.



For all proposed research that will involve human subjects in the first year or phase of the project, the institution must provide evidence of or a plan for review by an Institutional Review Board (IRB) upon final proposal submission to NIWC Pacific. The IRB conducting the review must be the IRB identified on the institution's Assurance. The protocol, separate from the proposal, must include a detailed description of the research plan, study population, risks and benefits of study participation, recruitment and consent process, data collection, and data analysis. Consult the designated IRB for guidance on writing the protocol. The informed consent document must comply with federal regulations (32 CFR 219.116). A valid Assurance along with evidence of appropriate training of all investigators should accompany the protocol for review by the IRB.

In addition to a local IRB approval, a secondary review of concurrence review and approval is required for all research intending to use military and/or civilian subjects by a cognoscente DOD IRB. The Army, Navy, or Air Force office associated with subject recruitment can provide guidance and information about their component's IRB review process.

The amount of time required to complete the IRB review/approval process may vary depending on the complexity of the research and/or the level of risk to study participants. Ample time should be allotted to complete the approval process. The IRB approval process can last between one to three months, followed by a DoD review that could last between three to six months. No DoD funding can be placed on a contract/grant toward human subject tasking until ALL approvals are granted and documentation provided to NIWC Pacific for compliance verification and approval.

#### **6.B.10. Animal Use**

No research proposals involving animal subjects shall be accepted under this BAA. Use of non-human primates is not permitted under this BAA.

#### **6.B.11. Recombinant DNA**

Proposals which call for experiments using recombinant DNA must include documentation of compliance with Department of Health and Human Services (DHHS) recombinant DNA regulations, approval of the Institutional Biosafety Committee (IBC), and copies of the DHHS Approval of the IBC letter.

#### **6.B.12. Institutional Dual Use Research of Concern**

As of September 24, 2015, all institutions and USG funding agencies subject to the United States Government Policy for Institutional Oversight of Life Sciences Dual Use Research of Concern must comply with all the requirements listed therein. If your research proposal directly involves certain biological agents or toxins, contact the cognizant Technical Point of Contact. U.S. Government Science, Safety, Security (S3) guidance may be found at <http://www.phe.gov/s3/dualuse>.

#### **6.B.13. Electronic and Information Technology**

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

### **6.C. FAR / DFARS Provisions & Clauses**

#### **6.C.1. Provisions**

For purposes of illustration and not limitation, the following provisions may be applicable to NIWC Pacific contracts:

<b>FAR Clause No.</b>	<b>Title</b>
52.204-8	Annual Representations and Certifications
52.204-16	Commercial and Government Entity Code Reporting
52.204-22	Alternative Line Item Proposal
52.204-24	Representation Regarding Certain Telecommunications and Video Surveillance Services or Equipment
52.209-7	Information Regarding Responsibility Matters
52.209-13	Violation of Arms Control Treaties or Agreements—Certification
52.215-16	Facilities Capital Cost of Money
52.215-22	Limitations on Pass-Through Charges—Identification of Subcontract Effort
52.216-1	Type of Contract
52.216-27	Single or Multiple Awards
52.217-4	Evaluation of Options Exercised at Time of Contract Award
52.217-5	Evaluation of Options
52.229-11	Tax on Certain Foreign Procurements—Notice and Representation.
52.230-1	Cost Accounting Standards Notices and Certification
52.230-7	Proposal Disclosure—Cost Accounting Practice Changes
52.233-2	Service of Protest
52.252-1	Solicitation Provisions Incorporated by Reference
52.252-5	Authorized Deviations in Provisions
<b>DFARS Clause No.</b>	<b>Title</b>
252.203-7005	Representation Relating to Compensation of Former DoD Officials
252.204-7007	Alternate A, Annual Representations and Certifications
252.204-7008	Compliance with Safeguarding Covered Defense Information Controls
252.204-7016	Covered Defense Telecommunications Equipment or Services--Representation
252.204-7017	Prohibition on the Acquisition of Covered Defense Telecommunications Equipment or Services--Representation
252.204-7019	Notice of NIST SP 800-171 DoD Assessment Requirements.
252.215-7003	Requirement for Submission of Data Other Than Certified Cost or Pricing Data—Canadian Commercial Corporation
252.215-7007	Notice of Intent to Resolicit
252.215-7009	Proposal Adequacy Checklist
252.215-7010	Requirements for Certified Cost or Pricing Data and Data Other Than Certified Cost or Pricing Data--Basic
252.215-7011	Requirements for Submission of Proposals to the Administrative Contracting Officer and Contract Auditor
252.215-7012	Requirements for Submission of Proposals via Electronic Media
252.215-7013	Supplies and Services Provided by Nontraditional Defense Contractors
252.225-7003	Report of Intended Performance Outside the United States and Canada—Submission with Offer
252.225-7032	Waiver of United Kingdom Levies—Evaluation of Offers
252.225-7973	Prohibition on the Procurement of Foreign-Made Unmanned Aircraft Systems—Representation. (DEVIATION 2020-O0015)
252.225-7974	Representation Regarding Persons that have Business Operations with the Maduro Regime (DEVIATION 2020-O0005)
252.227-7017	Identification and Assertion of Use, Release, or Disclosure Restrictions
252.227-7028	Technical Data or Computer Software Previously Delivered to the Government
252.239-7098	Prohibition on Contracting to Maintain or Establish a Computer Network Unless Such Network is Designed to Block Access to Certain Websites--Prepresentation
252.247-7022	Representation of Extent of Transportation by Sea

### 6.C.2. Clauses

FAR and DFARS clauses apply to any contract awarded under this BAA. Specific clauses depend on a variety of factors (e.g., contract type, contract value, business size, etc.) and will be negotiated at award.

**6.C.2.a. Combating Trafficking in Persons**

Appropriate language from FAR Clause 52.222-50 will be incorporated in all awards.

**6.C.2.b. Ensuring Adequate COVID-19 Safety Protocols for Federal Contractors**

DFARS Clause 252.223-7999 Ensuring Adequate COVID-19 Safety Protocols for Federal Contractors (DEVIATION 2021-O0009) will be incorporated in all awards.

**6.C.2.c. Certification Regarding Trafficking in Persons Compliance Plan**

Prior to award of a contract, for the portion of the contract that is for supplies, other than commercially available off-the-shelf items, to be acquired outside the United States, or services to be performed outside the United States, and which has an estimated value that exceeds \$500,000, the contractor shall submit the certificate as specified in paragraph (c) of 52.222-56, Certification Regarding Trafficking in Persons Compliance Plan.

**6.C.2.d. Updates of Information regarding Responsibility Matters**

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

**VII. AGENCY CONTACTS:**

Questions of a technical and/or business nature shall be submitted to the Contracting Officer through the e-Commerce Central web site (<https://e-commerce.sscno.nmci.navy.mil>).

Questions must reference the title and number of the BAA

This notice constitutes a BAA as contemplated in FAR 35.016. No additional written information is available, nor will a formal request for proposal (RFP) or other solicitation regarding this announcement be issued. Interested parties are invited to respond to this announcement. All responsible parties' responses will be considered.

**Appendix A: Templates for Volume 1: Technical Proposal**

**A.1 Cover Sheet for Volume 1: Technical Proposal**

(1) BAA Number	N66001-22-S-XXXX
(2) Technical Challenge(s) – (TC)(s), if applicable	
(3) Lead Organization Submitting Proposal	
(4) Type of Business, Selected Among the Following Categories: “Large Business”, “Small Disadvantaged Business”, “Other Small Business”, “HBCU”, “MI”, “Other Educational”, or “Other Nonprofit”	
(5) Contractor’s Reference Number (if any)	
(6) Other Team Members (if applicable) and Type of Business for Each	
(7) Proposal Title	
(8) Technical Point of Contact to Include: Title, First Name, Last Name, Street Address, City, State, Zip Code, Telephone, Fax (if available), Electronic Mail (if available)	
(9) Administrative Point of Contact to Include: Title, First Name, Last Name, Street Address, City, State, Zip Code, Telephone, Fax (if available), Electronic Mail (if available)	
(10) Volume 1 no more than the specified page limit	Yes/No
(11) Restrictions on Intellectual property rights details provided in Appendix A format?	Yes/No
(12) Research Data Management Plan included?	Yes/No
(13) OCI Waiver Determination, Notification or Certification [see Section 3 of the BAA] Included?	Yes/No
(13a) If No, is written certification included (Appendix A)?	Yes/No
(14) Are one or more U.S. Academic Institutions part of your team?	Yes/No
(14a) If Yes, are you including an Academic Institution Acknowledgment Statement with your proposal for each U.S. Academic Institution that is part of your team (Appendix A)?	Yes/No
(15) Total Funds Requested from IARPA and the Amount of Cost Share (if any)	\$
(16) Date of Proposal Submission	

**Appendix A.2 Academic Institution Acknowledgment Letter**

**-- Please Place on Official Letterhead --**

<Insert date>

To: Contracting Officer  
NIWC Pacific  
Office of the Director of National Intelligence Washington, D.C.  
20511

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

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

The undersigned further acknowledges that he/she is aware of the Intelligence Advanced Research Projects Activity's proposed contractual relationship with <insert name of institution> through N66001-22-S-XXXX and is hereby approved by the undersigned official, serving as the president, vice-president, chancellor, vice-chancellor, or provost of the institution.

<Name>

Date

<Position>

**Appendix A.3 Intellectual Property Rights**

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

**Patents**

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

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

**Data (Including Technical Data and Computer Software)**

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

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

- (1) Intended use of the data, including, technical data and computer software, listed above in the conduct of the proposed research:
- (2) Description of Asserted Rights Categories, specifying restrictions on Government’s ability to use,

**modify, reproduce, release, perform, display, or disclose technical data, computer software, and deliverables incorporating technical data and computer software listed above:**

- (3) How the offered rights will permit the Government to reach its program goals (including transition) with the rights offered:**
- (4) Cost to the Government to acquire additional or alternative rights, if applicable:**
- (5) Alternatives, if any, that would permit IARPA to achieve program goals:**

**Appendix A.4 Organizational Conflicts of Interest Certification Letter**

(Month DD, YYYY)

Office of the Director of National Intelligence  
Intelligence Advanced Research Projects Activity (IARPA) SMART  
EPANTS Program  
ATTN: Jacob Ward, NIWC Pacific, Contracting Officer

Subject: OCI Certification

Reference: <Insert Program Name>, N66001-22-S-XXXX, (Insert assigned proposal ID#, if received)

Dear \_\_\_\_\_,

In accordance with Broad Agency Announcement N66001-22-S-XXXX, Organizational Conflicts of Interest (OCI), and on behalf of (Offeror name) I certify that neither (Offeror name) nor any of our subcontractor teammates has as a potential conflict of interest, real or perceived, as it pertains to the SMART ePANTS program. Please note the following subcontractors and their proposed roles:

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

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

Sincerely,

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

(Insert signature)

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



## Appendix A.5 Three Chart Summary of the Proposal

### Chart 1: Overview

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

### Chart 2: Key Innovations

- Innovation 1
- Innovation 2
- Innovation 3

Graphics / Data

### Chart 3: Expected Impact

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

## Appendix A.6 Research Data Management Plan (RDMP) N66001-22-S-XXXX

The Offeror must address each of the elements noted below.

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

1. **Sponsoring IARPA Program** (required):
2. **Offeror** (i.e., lead organization responding to BAA) (required):
3. **Offeror point of contact** (required):  
**The point of contact is the proposed principal investigator (PI) or his/her Designee.**
  - a. **Name and Position:**
  - b. **Organization:**
  - c. **Email:**
  - d. **Phone:**
4. **Research data types** (required):  
**Provide a brief, high-level description of the types of data to be collected or produced during the project.**
5. **Standards for research data and metadata content and format** (required):  
**Use standards reflecting the best practices of the relevant scientific discipline and research community whenever possible.**
6. **Plans for making the research data that underlie the results in peer-reviewed journal articles and conference papers digitally accessible to the public** at the time of publication/conference or within a reasonable time thereafter (required):  
**The requirement could be met by including the data as supplementary information to a peer reviewed journal article or conference paper or by depositing the data in suitable repositories available to the public.**
  - a. **Anticipated method(s) of making research data publicly accessible:**  
\_\_\_ Provide dataset(s) to publisher as supplementary information (if publishers allow public access)  
\_\_\_ Deposit dataset(s) in Data Repository  
\_\_\_ Other (specify) \_\_\_\_\_
  - b. **Proposed research data repository or repositories** (for dataset(s) not provided as supplementary information):  
**Suitable repositories could be discipline-specific repositories, general purpose research data repositories, or institutional repositories, as long as they are publicly accessible.**
  - c. **Retention period, at least three years after publication of associated research results:**  
**State the minimum length of time the data will remain publicly accessible.**
  - d. **Submittal of metadata to IARPA:**  
**Offerors are required to make datasets underlying the results published in peer-reviewed journal or conferences digitally accessible to the public to the extent feasible. Here, the Proposer should state a commitment to submit metadata on such datasets to IARPA in a timely manner. Note: This does not supersede any requirements for deliverable data, as the award document may include metadata as a deliverable item.**
7. **Policies and provisions for sharing and preservation** (as applicable):
  - a. Policies and provisions for appropriate protection of privacy, confidentiality, security, and intellectual property:
  - b. Descriptions of tools, including software, which may be needed to access and interpret the data:
  - c. Policies and provisions for re-use, re-distribution, and production of derivative works:
8. **Justification for not sharing and/or preserving data underlying the results of peer-reviewed publications** (as applicable):  
**If, for legitimate reasons, the data cannot be shared and preserved, the plan must include a justification detailing such reasons. Potential reasons may include privacy, confidentiality, security, IP**

rights considerations; size of data sets; cost of sharing and preservation; time required to prepare the dataset(s) for sharing and preservation.

**Appendix B: Templates for Volume 2: Cost Proposal**

**Appendix B.1 Cover Sheet for Volume 2: Cost Proposal**

(1) BAA Number	N66001-22-S-XXXX
(2) Technical Challenge(s) (TC)(s)	
(3) Lead organization submitting proposal	
(4) Type of Business, Selected Among the Following Categories: “Large Business”, “Small Disadvantaged Business”, “Other Small Business”, “HBCU”, “MI”, “Other Educational”, or “Other Nonprofit”	
(5) Contractor’s Reference Number (if any)	
(6) Other Team Members (if applicable) and Type of Business for Each	
(7) Proposal Title	
(8) Technical Point of Contact to Include: Title, First Name, Last Name, Street Address, City, State, Zip Code, Telephone, Fax (if available), Electronic Mail (if available)	
(9) Administrative Point of Contact to Include: Title, First Name, Last Name, Street Address, City, State, Zip Code, Telephone, Fax (if available), Electronic Mail (if available)	
(10) Contract type/award Instrument Requested: specify	
(11) Place(s) and Period(s) of Performance	
(12) Total Proposed Cost Separated by Basic Award and Option(s) (if any)	
(13) Name, Address, Telephone Number of the Offeror’s Defense Contract Management Agency (DCMA) Administration Office or Equivalent Cognizant Contract Administration Entity, if Known	
(14) Name, Address, Telephone Number of the Offeror’s Defense Contract Audit Agency (DCAA) Audit Office or Equivalent Cognizant Contract Audit Entity, if Known	
(15) Date Proposal was Prepared	
(16) DUNS Number	
(17) TIN Number	
(18) CAGE Code	
(19) Proposal Validity Period [minimum of 180 days]	
(20) Cost Summaries Provided (Appendix B)	
(21) Size of Business in accordance with NAICS Code 541712	

**Appendix B.2 Prime Contractor/Subcontractor Cost Element Sheet for Volume 2: Cost Proposal**

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

\*Identify Statement of Work, Milestone, or Work Breakdown Structure paragraph, or provide a narrative explanation as an addendum to this Table that describes the effort to be performed.

**Appendix B.3 - Software and IP Costs**

<b>Software and IP Costs</b>		
<b>Item</b>	<b>Cost</b>	<b>Date of Expiration</b>
(List)		

NOTE: Educational institutions and non-profit organizations as defined in FAR part 31.3 and 31.7, respectively, at the prime and subcontractor level may deviate from the cost template in Appendix B when estimating the direct labor portion of the proposal to allow for OMB guided accounting methods (2 CFR 220) that are used by their institutions. The methodology shall be clear and provide sufficient detail to substantiate proposed labor costs. For example, each labor category shall be listed separately; identify all Key Personnel and significant contributors provide hours/rates or salaries and percentage of time allocated to the project.





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