Advanced Research Announcement (ARA) with Calls
Overview Information

NAICS Code: The NAICS code for this acquisition is 541715 and the small business size is 1,000 employees.

Federal Agency Name: Air Force Research Laboratory, Sensors Directorate, AFRL/RYD

ARA Title: Microelectronics Innovation for Next-generation System Advancement and Validation (MINSAV)

ARA Type: Initial Announcement

ARA Number: FA8650-19-S-1932

THIS IS AN ADVANCED RESEARCH ANNOUNCEMENT (ARA) THAT WILL SOLICIT WHITE PAPERS/PROPOSALS THROUGH CALLS. THIS ANNOUNCEMENT POSTS THE BASIC ARA AND DOES NOT REQUEST SUBMITTALS AT THIS TIME. THE BASIC ARA WILL REMAIN OPEN FOR CALLS UNTIL 01 OCT 2024.

Calls (One-Step or Two-Step) - See Section IV for instructions:

Over the period of this ARA, calls may be issued requesting white papers or proposals for specific area(s) of interest. It will be determined on a call by call basis whether the announcement is a two-step (white papers) or one-step (proposals). Each call will contain specific requirements and any pertinent information. White papers/proposals submitted in response to each call will be accepted as specified and evaluated in accordance with the Proposal Review Information (Section V1 and 2). Offerors should monitor the Federal Business Opportunities (FedBizOpps)(FBO) website at http://www.fbo.gov in the event this announcement is amended or calls are issued.

White Paper/Proposal Due Date and Time:

ONE-STEP Call

- PROPOSAL DUE DATE AND TIME - to be determined (TBD) on individual calls.

TWO-STEP Call

- First Step: WHITE PAPER DUE DATE AND TIME - TBD on individual calls.
- Second Step: PROPOSAL DUE DATE AND TIME - To be provided in "Requests for Proposals (RFP)" sent to offerors whose white papers are considered to meet the needs of the Air Force (AF).

***NOTE*: White paper/proposal receipt after the due date and time shall be governed by the provisions of FAR 52.215-1(c)(3).** Any white paper or proposal received at the Government office designated in this ARA after the exact time specified is "late" and will not be considered except at the Contracting Point of Contact's discretion. It should be noted that this installation observes strict security procedures to enter the facility. These security procedures are NOT considered an interruption of normal Government processes, and proposals received after the stated date and time in the call or Request for Proposal letter as a result of security delays will be considered "late." Furthermore, note that if offerors utilize commercial carriers in the delivery of proposals, they may not honor time-of-day delivery guarantees on military installations. Be advised, if the U.S. Postal Service is used, this building only receives U.S. Postal Mail twice a week and delivery by that means may not meet the proposal due date and time. Early white paper/proposal submission is encouraged.

Submission: White papers and proposals must be submitted to the Contracting Point of Contact (POC): Jennifer Skalski, Contract Negotiator, AFRL/RYKSR or Dawn Dalhamer, Contracting Officer (CO), AFRL/RYKSE, Bldg. 45, 2130 8th St., WPAFB OH 45433-7541 or as otherwise indicated within the individual call.

Annual Updates: It is noted, for ease of reference, that this ARA will be republished at yearly intervals with required updates.

Solicitation Request: Air Force Research Laboratory, Sensors Directorate, Wright-Patterson Air Force Base *is* *not* soliciting white papers or proposals on the overarching effort described below. Individual calls, within scope of the ARA, will be issued that detail specific requirements. Unless otherwise stated in an individual call, all other requirements listed within this ARA are considered applicable.

Type of Contract/Instrument: The Air Force reserves the right to award contract(s) and/or Other Transaction(s) pursuant to 10 U.S.C. 2373 or 10 U.S.C 2371(b), based on the instrument deemed most appropriate. It is anticipated that contracts awarded under this ARA will generally be Other Transactions (OT), Cost Plus Fixed Fee (CPFF) contracts, or other cost type contracts.

***NOTE*:** Cost reimbursable contracts require successful offerors to have an accounting system considered adequate by the Defense Contract Management Agency (DCMA) for tracking costs applicable to the contract.

***NOTE*: If proposing a Federal Acquisition Regulation (FAR) based contract, the FAR clause references in this ARA shall apply. This announcement incorporates FAR and supplement provisions and clauses by reference. The full text of these provisions and clauses can be found at http://farsite.hill.af.mil. If proposing an Other Transaction (OT), these FAR references and clauses will not apply. The terms and conditions of an OT will be developed and negotiated on a case-by-case basis.**

Estimated Program Cost: The total estimated program value is $800,000,000.00 with multiple awards ranging from $10,000,000.00 to $200,000,000.00 (The AF reserves the right to exceed amounts if determined to be in the best interest of the Government).

Anticipated Number of Awards: The Air Force anticipates awarding multiple awards for this announcement. However, the AF reserves the right to award zero, one, or more Other Transactions and/or contracts, for all, some or none of the solicited effort based on the offeror's ability to perform desired work and funding fluctuations. There is no limit on the number of OTs or contracts that may be awarded to an individual offeror.

Brief Program Summary: AFRL/RYD has a need to advance the design and fabrication of commercial and Government developed sensor (signal) generation and processing microelectronics technologies for the purpose of maturing, verifying, assuring, and delivering next generation national defense capabilities to critical Department of Defense (DoD) systems through robust experimentation and testing.

Experimentation under the MINSAV ARA will construct prototype systems that demonstrate microelectronics capabilities that yield technical offset for DoD related autonomous, artificial intelligence, precision navigation and timing, electronic warfare, data processing, spatial/spectrally agile, and strategic applications**.**

Communication Between Prospective Offerors and Government Representatives: Dialogue between prospective offerors and Government representatives is encouraged until submission of proposals. Technical communication will be managed by the technical POC listed below. Discussions with any of the POCs shall not constitute a commitment by the Government to subsequently fund or award any proposed effort. No guidance related to technical approach will be given. However, questions related to the objectives of the effort or prior similar efforts may be answered. Only Contracting Officers are legally authorized to commit the Government. If there is any doubt as to whether a response provides a competitive advantage, the answer will be posted publicly via an amendment to this ARA on FBO. For offerors whose white papers are not selected to continue to proposal stage, notification and feedback will be managed by the Contracting POCs.

Address technical questions to the Technical POC:
Stacie Smith-Turner, Program Manager, AFRL/RYDT
2241 Avionics Circle, WPAFB OH 45433
(937) 713-8720 or afrl.ryd.minsav@us.af.mil

Address contracting questions to the Contracting POCs:
Dawn Dalhamer, Contracting Officer, AFRL/RYKSE
2130 Eighth Street, Area B, Bldg. 45, WPAFB OH, 45433-7541
(937) 713-9968 or afrl.ryd.minsav@us.af.mil

Jennifer Skalski, Contract Negotiator, AFRL/RYKSR
2130 Eighth Street, Area B, Bldg. 45, WPAFB OH 45433-7541
(937) 713-9837 or afrl.ryd.minsav@us.af.mil

Full Text Announcement

I. **Program Description**: Air Force Research Laboratory, Sensors Directorate (AFRL/RYD) is announcing its intent to solicit proposals under this "ARA with Calls". Solicitations for white papers/proposals will be accomplished via calls. The calls will encompass the following effort:

1. **Statement of Objective / Description of Technical Area(s):** The scope of the ARA is to develop technologies with commercial and defense industrial base partners to construct prototype systems that demonstrate microelectronics capabilities yielding technical offset for Department of Defense (DoD) applications. These capabilities also provide protections to ensure military unique chips are protected from malicious exploit (loss of DoD Intellectual Property (IP)) and from malicious tampering during design, manufacturing, and supply chain lifecycle by addressing the entire microelectronics ecosystem. In addressing the assurance of the microelectronics ecosystem, MINSAV facilitates rapid modernization of existing military systems with the microelectronic components required to maintain the technical overmatch for warfighting systems.

   MINSAV will acquire the design and fabrication of commercial and Government developed sensor (signal) generation and processing microelectronics technologies that enhance national defense capabilities in Position Navigation and Timing (PNT), Autonomy, Communications, Artificial Intelligence / Machine Learning (AI/ML), Data Processing and Spatial / Spectral Agility (SSA). Demonstrations of these technologies and evaluation of the differentiating capability obtained through use of assured, advanced microelectronics are key to achieving the program objectives.

   Calls to be issued against the MINSAV ARA must a) fall under at least one of the Technical Areas detailed in paragraph I.1.a. below and 2) involve at least one of the types of tasks detailed in paragraph I.1.b. below.

   a. **Sensors Areas of Interest**

      1) **Intellectual Property Acquisition, Development, Manufacturing, and Distribution** to Defense Industrial Base (DIB) partners and system developers;

      2) **Demonstrator Construction and Assessment** of differentiating capabilities achievable through implementation of advanced microelectronics;

      3) **Research and Development (R&D)** of processing architectures;

      4) **Enhancing Availability of Critical and Common IP, Manufacturing, and Assurance Tools** to facilitate best supply adoption by DoD research, development, and acquisition programs;

5) **Acquiring Access to IP sources, Design Capabilities, Manufacturing, and Verification and Validation Services** for construction and evaluation of prototype components

6) **Enhancement and Assessment of Assurance Technologies** that enable integrity evaluation of microelectronic technologies as they move through the supply chain.

b. **Tasks**

1) **Next Generation Disruptive R&D**

Develop and prototype disruptive electronics with commercial and defense industry partners, explore novel secure circuit architectures for next generation computing and strategic applications, and construct tools that allow rapid redesign of complex systems. Go beyond functional verification through development and prototyping accelerated modeling, simulation, and advanced verification environments. Develop secure design environments (e.g., the Air Force Research Laboratory-developed Trusted Silicon Stratus) capable of supporting and securing IP development within a domestic ecosystem and prevent its exfiltration.

2) **Capture and Secure Microelectronics R&D and Prototyping**

Develop and prototype capability for the capture of the DoD research and development enterprise outputs and facilitate secure access for its reuse. Develop prototype fabrication and packaging flows, methodologies, and manufacturing capabilities at Government and commercial foundries. Investigate solutions for securing, protecting, and assessing the integrity of the microelectronics supply including development of security and intelligence data for designs and architectures. Integrate new materials, processes, devices and architectures into hardware manufacturing demonstrations.

3) **New Microelectronics Development, Demonstration, and Capability Insertion**

This investment is intended to ensure that the most significant, new Commercial off the Shelf (COTS) developments address high security, high integrity devices, as required by DoD, and address DoD needs during industry development. Prototype development of system-on-chip (SoC) technology and the associated design, packaging, testing, and integration of SoCs into a capability with built in assurance. Prototype aggregated manufacturing of innovation at sub 22nm nodes.

4) **Commercial off the Shelf Programmable IC Co-Development**

Pilot secure Government / defense industrial base / commercial microelectronics device co-development capabilities for military system demonstration that provide protection, integrity, provenance and traceability throughout the device construction effort. Leverage commercially-available cloud-based services at partner organizations to secure commercial IP and develop and promote security features, software and hardware assurance tools, and capabilities that meet future DoD needs.

5) **Enable a Robust Modernization Strategy**

Develop and prototype methods and devices that enhance proficiency and support the transition, upgrade, and future proofing of defense systems. Key aspects include the acceleration and alignment of verification and qualification processes with timelines and acquisition and sustainment requirements. Work collaboratively with programs and innovation thrusts to enhance demonstration and prototyping throughout the service lifecycle management enterprise.

6) **Innovation Hubs and Advanced Technology Centers**

Develop and prototype methods and institutions that group innovators and developers from industry, academia, and Government labs into integrated advanced technology center development teams. Individual group members communicate industry best practices, academic research thrusts, and next-generation military program needs to the existing enterprise to facilitate enhanced capability, scientific development, and program roadmaps for insertion into new S&T research programs. Prototype methods for innovation hub teams to combine existing research and development institutions with new investments in microelectronics technologies and fabrication facilities to construct prototypes and demonstration vehicles for modernized systems that provide warfighter advantage. The approach is based on a knowledge economy where a worker's ability to capitalize on device fabrication investments is a key component to the ability to generate demonstration prototypes.

2. **Within Scope Modifications:** Potential offerors are advised that due to the inherent uncertainty of research and development efforts, awards resulting from this announcement may be modified during performance to make within scope changes, to include but not limited to, modifications that may increase overall contract ceiling amount.

3. **Deliverable Items:**

   a. Data Items: DD Form 1423-1 CDRLs will be utilized on contract awards. Applicable data items will be identified in each call. A sample listing is included within the Model Contract, as attached to this ARA. OTs will specify data items on a case-by-case basis.

   b. Software: Software deliverables are TBD per individual call, if applicable.

   c. Hardware: Hardware deliverables are TBD per individual call, if applicable.

   d. Other: TBD per individual call, if applicable.

4. **Schedule:**

   a. Overall Period of Performance: TBD per individual call.

   b. Data Items: TBD per individual call.

   c. Software: TBD per individual call.

   d. Hardware: TBD per individual call.

5. **Other Requirements:**

   a. **Program Security Classification:** It is anticipated that all awards will be unclassified.

   b. **OPSEC:** General Operations Security (OPSEC) procedures, policies and awareness are required in an effort to reduce program vulnerability from successful adversary collection and exploitation of critical information. OPSEC will be applied throughout the life cycle of the contract. The Critical Information List (CIL) and the RY OPSEC Plan will be provided upon request by AFRL/ RYOY Information Protection Office. While working on the Government installation, OPSEC guidance and OPSEC training will be provided by AFRL/RYOY Information Protection Office. This training will ensure contractors are familiar with RY's CIL and RY's OPSEC Plan as it pertains to their contract. The contractor shall apply OPSEC in their management of their current program IAW AFI 10-701 Operations Security and WPAFB Supplement to AFI-10-701.

   c. **Program Protection Plan (PPP):** All DoD contractors (including subcontractors) shall supplement their current security practices by requiring any personnel involved in executing this contract where critical program information (CPI) has been identified to protect the CPI to the standards articulated in the Program Protection Plan and in accordance with DoDI 5200.39. Upon contract award, all identified DoD contractors (including subcontractors) shall acknowledge and meet the requirements stated by the Program Manager for the protection of CPI. The DoD contractor must immediately notify the U.S. Government upon the discovery of any nonconformance with CPI protection

d. **Export Control:** Information involved in this effort may be subject to Export Control (International Traffic in Arms Regulation (ITAR) 22 CFR 120-131, or Export Administration Regulations (EAR) 15 CFR 710-774). If effort is subject to export control, then a Certified DD Form 2345, Militarily Critical Technical Data Agreement, will be required to be submitted with proposal.

e. **Export-Controlled Items:** As prescribed by DFARS 225.7901-4, DFARS 252.225-7048, "Export-Controlled Item (Jun 2013)" is contained in this solicitation. This clause (or similar language) shall be contained in ALL resulting awards.

f. **Safety:** The Contractor shall comply with all Air Force, federal, state, and local safety and environmental regulations. An approved safety plan in accordance with AFI 91-202 AFRL Supplement 1 shall be obtained before any experiment can be conducted at Wright-Patterson AFB and shall comply with all Air Force safety and environmental regulations. The contractor shall comply with system safety requirements contained in MIL-STD 882E, section 4, "General Requirements" for any deliverable systems or hardware and software interfaces with those components. The contractor shall test and verify the safety-critical hardware and software for safety acceptance.

g. **Contractor Performance Assessment Reporting System (CPARS):** CPARS will likely be applicable, but will be determined on a call by call basis in accodrance with FAR 42.1502 and DFARS 242.1502 (and CPARS Guide 2016, Section B, 2.0). Interim and final evaluations of contractor performance for contract awards will be prepared in accordance with AFFARS 5342.1503. The final performance evaluation will be prepared at the time of completion of work. In addition to the final evaluation, interim evaluation(s) will be prepared annually. If an IDIQ contract is awarded as a result of a call, CPARS will be conducted for each task order. Awardees will be requested to provide a POC to receive notifications of the opportunity to provide feedback. The contractor will be permitted 14 days to review the document and to submit additional information or a rebutting statement. If agreement cannot be reached between the parties, the matter will be referred to an individual one level above the Contracting Officer, whose decision will be final. Copies of the assessments, contractor responses, and review comments, if any, will be retained as part of the contract file, and may be used to support future award decisions for other procurements.

h. **Unique/Special Clauses:** TBD per individual call/award.

i. **Associate Contractor Agreement:** TBD per individual call/award.

j. **Options:** TBD per individual call/award.

6. **Other Information:**

a. **Government Furnished Property (GFP) Availability:** TBD per individual call.

In accordance with FAR 45.201(b), the contractor is responsible for all costs related to making the property available for use, such as payment of all transportation, installation or rehabilitation costs. If GFP is included in the call or requested in a proposal, the following clauses/provisions apply:

1) FAR 52.245-1 Government Property or FAR 52.245-1, Alt II if the resulting contract is with a nonprofit organization or applied research at nonprofit organizations (Apr 2012);
2) FAR 52.245-9 Use and Charges (Apr 2012);
3) DFARS 252.211-7007, Reporting of Government Furnished Property (Aug 2012);
4) DFARS 252.245-7001, Tagging, Labeling and Marking of Government Furnished Property (Apr 2012);
5) DFARS 252.245-7002, Reporting Loss of Government Property (Dec 2017);
6) DFARS 252.245-7003, Contractor Property Management System Administration (Apr 2012);
7) DFARS 252.245-7004, Reporting, Reutilization, and Disposal (Dec 2017).

b. **Government Furnished Information (GFI) Software:** TBD per individual call/award.

c. **Base Support/Network Access:** Base support is not anticipated. Network access will be determined per individual call.

d. **Overseas Performance:** Overseas performance is not anticipated.

e. **Organizational Conflict of Interest (OCI):** TBD per individual call/award.

f. **Data Rights:** Data rights will be determined per individual call. Data Rights desired by the contractor should be included with proposal submission as part of Section K (Reps and Certs). See attached model contract.

The Air Force Research Laboratory is engaged in the discovery, development, and integration of warfighting technologies for our air, space, and cyberspace forces. As such, rights in technical data and NCS developed or delivered under this contract are of significant concern to the Government. The Government will therefore carefully consider any restrictions on the use of technical data, NCS, and NCS documentation which could result in transition difficulty or less-than full and open competition for subsequent development of this technology.

In exchange for paying for development of the data, the Government expects technical data, NCS, and NCS documentation developed entirely at Government expense to be delivered with Unlimited Rights.

Technical data, NCS, and NCS documentation developed with mixed funding are expected to be delivered with at least Government Purpose Rights (GPR). Offers that propose delivery of technical data, NCS, or NCS documentation subject to GPR should fully explain how the data was developed at private expense. Specifically, offers must explain what technical data, NCS, or NCS documentation developed with costs charged to indirect cost pools and/or costs not allocated to a Government contract will be incorporated, how the incorporation will benefit the program, and address whether those portions or processes are segregable.

Offerors that propose delivery of technical data, NCS, or NCS documentation subject to Limited Rights, Restricted Rights, or Specifically Negotiated License Rights will be considered. Proposals should fully explain what technical data, NCS, or NCS documentation developed with costs charged to indirect cost pools and/or costs not allocated to a Government contract will be incorporated and how the incorporation will benefit the program and whether those portions or processes are segregable.

Offerors shall include the data rights assertions as required by DFARS 252.227-7017, Identification and Assertion of Restrictions on the Government's Use, Release, or Disclosure of Technical Data or Computer Software. The assertions list is included in Section K and due at time of proposals. Assertions must be completed with specificity. Each assertion must identify both the data and each such item, component, or process listed. Nonconforming assertions lists will be rejected.

Terms used in this section are defined in the clauses at 252.227-7013, Rights in Technical Data-Noncommercial Items, and 252.227-7014, Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation.

THIRD PARTY SOFTWARE (COMMERCIAL AND NONCOMMERCIAL):

DFARS 252.227-7014(d) describes requirements for incorporation of third party computer software. Any third party software (commercial and noncommercial) to be incorporated into a deliverable must be clearly identified in the proposal. Prior to delivery of any third party software, the contractor will obtain an appropriate license for the Government, and the written approval of the Contracting Officer.

Any third party software to be delivered to the Government that are not reasonably identifiable at proposal submission, must still be approved by the contracting officer prior to incorporation into a system deliverable. This obligation to obtain pre-approval by the contracting officer, as described above, continues throughout contract administration.

The Government will neither accept nor execute a DD Form 250 for the software deliverables until the Contractor obtains from all third party software suppliers and/or vendors (Licensor) licenses that comply with the following terms and conditions for the Government (Licensee):

1) The license shall not subject the Government to liability that is indefinite or indeterminate, such as an indemnification clause, as it would constitute an obligation in advance or in excess of an appropriation and violate the Anti-Deficiency Act.

2) The license shall not create a contingent liability for the Government. This includes, but is not limited to: unilateral price increases, automatic assessment of charges, and automatic renewal of the license.

3) The license shall be governed by Federal Statutes, Case Law, and Federal Regulations, and shall not be subject to the laws or jurisdiction of any municipality, state, or foreign country.

4) The license shall not include non-substitution language that would preclude or limit the Government from using another vendor/reseller and/or product to fulfill Government requirements.

5) The license shall not comment on entitlement to attorney fees.

6) The Licensor shall not have the authority to unilaterally terminate the license. All remedies available shall be consistent with the Disputes Clause in the underlying basic contract.

7) The Licensor shall not have the right to enter the premise or monitor the networks of Licensee for the purpose of auditing the use of the license.

8) The Licensor shall not use any injunctive relief clauses as the Licensor cannot prevent the Licensee from performing mission operations.

9) The Licensor shall not have the authority to control any litigation between a third party and the Licensee.

10) The Licensor shall not use the fact that the Licensee is using the Licensor's products in any notification to the public (e.g., no publicity rights permitted).

II. **Award Information:**

1. **Anticipated Award Date:** TBD per individual call.
2. **Anticipated funding**: TBD per individual call, to include funding profile.

III. **Eligibility Information:**

1. **Eligible Offeror**: This is an unrestricted solicitation. Businesses/Educational Institutions of all sizes are encouraged to propose on all or any part of this solicitation under each call.
2. **Cost Sharing or Matching**: Cost sharing is not required.

3. **Federally Funded Research and Development Centers**: The following guidance is provided for Federally Funded Research and Development Centers (FFRDCs) contemplating submitting a proposal, as either a prime or subcontractor. FAR 35.017-1(c) (4) prohibits an FFRDC from competing with any non-FFRDC concern in response to a Federal agency request for proposal for other than the operation of an FFRDC (with exceptions stated in DFARS 235.017-1(c) (4)). There is no regulation prohibiting an FFRDC from responding to a solicitation. However, the FFRDC's sponsoring agency must first make a determination that the effort being proposed falls within the purpose, mission, general scope of effort, or special competency of the FFRDC, and that determination must be included in the FFRDC's proposal. In addition, AFRL must make a determination that the work proposed would not place the FFRDC in direct competition with domestic private industry. Only after these determinations are made, would a determination be made concerning the FFRDC's eligibility to receive an award.
4. **Government Agencies**: If a Government agency is interested in performing work, contact the Technical POC identified in the call. If those discussions result in a mutual interest to pursue your agency's participation, the effort will be pursued independent of this announcement.
5. **Other:**
    a. **Foreign Participation:** Foreign Participation is not anticipated, however, will be considered on a case-by-case basis and identified in each call. If it is determined that foreign participation is not allowed, the US Prime Contractor and/or Sub-Contractor may hire foreign national with prior FDO approval; however, FNs will be limited to Public Domain information only. Public Domain information is defined as information that is releasable to the general public and sometimes referred to as open source material. Examples include but are not limited to newspapers, magazines and information posted on the internet. Any proprietary information will have to be appropriately protected.
    b. **Export Control:** This acquisition may involve data that is subject to export control laws and regulations. This determination will be made on a case-by-case basis and identified in each call. If the data is determined to be subject to export control laws, only contractors who are registered and certified with the Defense Logistics Services Center (DLSC) and have a legitimate business purpose may participate in this solicitation. Contact the Defense Logistics Services Center, 74 Washington Avenue N., Battle Creek, Michigan 40917-3084 (1-800-352-3572) for further information on the certification process. You must submit a copy of your approved DD Form 2345, Militarily Critical Technical Data Agreement, with your proposal, if applicable.
    c. **Proposal Submissions:** There are no limits to the number of white papers/proposals an offeror may submit.

    NOTE: You may be ineligible for award if all requirements of this solicitation are not met on the white paper/proposal due date, as identified in each call.

IV. White Paper / Proposal and Submission Information:

1. **Overview:** White papers and/or proposals submitted under a call shall be in accordance with the instructions provided both in the specific call and this announcement. Each call will identify itself as a one-step or two-step process. For individual calls, the Government intends to review resulting white papers/proposals and award all, some, or none of the proposal received without negotiations/discussions. However, the Government does reserve the right to negotiate with those offerors whose proposals have been selected for funding. Offerors should be alert for any ARA/call amendments that may change proposal requirements or permit extensions to proposal submission dates.

2. **White Paper Instructions (Two Step):**

   a. General Instructions:

      1) Offerors will submit a white paper and rough order of magnitude (ROM) cost no later than (NLT) the due date stated within each individual call.

      2) White papers must reference the announcement number (FA8650-19-S-1932) and call name/number.

      3) Offerors must submit one (1) original and five (5) hard copies of the white paper to the Contracting POC.

      4) Offerors must also include 2 CDs in Microsoft Office or Adobe format containing all electronic versions of required submittals. All electronic versions must match the hard copies. If there is a discrepancy between hard copies and electronic copies, the hard copies will take precedence. The CDs should be labeled with the company name and proposal title.

      5) Offerors are advised that only Contracting Officers are legally authorized to contractually bind or otherwise commit the Government.

      6) The cost of preparing white papers in response to this ARA is not considered an allowable direct charge to any resulting or any other contract; however, it may be an allowable expense to the normal bid and proposal indirect cost as specified in FAR 31.205-18.

      7) **No classified** white papers or ROMs will be accepted.

   b. Technical:

      1) Page Limitations: The following describes the white paper page limitations:

         a) White papers shall be limited to (TBD per individual call) pages.

         b) Font shall be standard 10-point business font Arial.

         c) Character spacing must be “normal,” not condensed in any manner.

         d) Pages shall be double-spaced (must use standard double-space function in Microsoft Word), double sided (each side counts as one page), 8.5 by 11 inches, with at least one-inch margins on both sides, top and bottom.

e) All text, including text in tables and charts, must adhere to all font size and line spacing requirements listed herein. Font and line spacing requirements do not have to be followed for illustrations, flowcharts, drawings, and diagrams. These exceptions shall not be used to circumvent formatting requirements and page count limitations by including lengthy narratives in such items.

f) Pages shall be numbered starting with the cover page being Page 1, and the last page being no greater than Page (TBD per individual call). The page limitation covers all information including indices, photographs, foldouts (counted as 1 page for each 8.5 by 11 portion) tables, charts, appendices, attachments, resumes, etc.

g) Format: The white paper will be formatted as follows:

i. Section A: Solicitation (FA8650-19-S-1932) and Call Number (TBD per call), Title of Program, Name of Company, Business Size, Company's Commercial and Government Entity (CAGE) number, Dun & Bradstreet (D&B) Data Universal Numbering System (DUNS) number, the contractor's Contracting POC and Technical POC with appropriate telephone numbers, fax numbers, and email addresses for the POCs.

ii. Section B: Period of Performance and Task Objectives;

iii. Section C: Technical Summary and Proposed Deliverables; and

iv. Section D: Cost (Rough Order of Magnitude (ROM)).

NOTE: The Government will check the white paper for conformance to the stated requirements. Any pages in excess of the stated page limitation will not be considered for review purposes.

2) The white paper shall include a discussion of the nature and scope of the research and the offeror's proposed technical approach. The Government will review the white papers in accordance with the White Paper Review Criteria, set forth in Section V below. Based on this review, the Government will determine which white papers have the potential to best meet Air Force needs. Offerors will be notified of the disposition of their white papers. It is anticipated that Government review of the white papers submitted will take 30 working days.

Those offerors submitting white papers assessed as meeting AF needs will be asked (via RFP) to submit a full technical and cost proposal. Offerors not requested to submit proposals will be notified but may, however, still elect to submit. An offeror submitting a proposal without first submitting a white paper **will not** be eligible for an award.

c. Cost: The cost portion of the white paper shall include a ROM cost estimate. No detailed price or cost support information should be forwarded; only a time-phased bottom line figure should be provided.

d. Review: The Government will review the white papers in accordance with the White Paper Review Criteria, set forth in Section V below. Based on this review, the Government will determine which white papers have the potential to best meet Air Force needs. Offerors will be notified of the disposition of their white papers. It is anticipated that Government review of the white papers submitted will take 30 working days.

   Those offerors submitting white papers assessed as meeting AF needs will be asked (via RFP) to submit a full technical and cost proposal. Offerors not requested to submit proposals will be notified but may, however, still elect to submit. An offeror submitting a proposal without first submitting a white paper **will not** be eligible for an award.

e. Other Information: Multiple white papers within the purview of this announcement may be submitted by each offeror. If the offeror wishes to restrict its white papers, they must be marked with the restrictive language stated in FAR 52.215-1(e).

f. White Paper/Proposal Content Summary: You may be ineligible for award if all requirements of this solicitation are not met on the proposal due date.

3. **Proposal Instructions (One Step and/or Request for Proposal)**:

   a. General Instructions:

      1) Offerors will submit a technical and cost proposal within TBD working days of the Request for Proposal (to be determined for each call/RFP). After receipt, proposals will be reviewed in accordance with the award criteria as defined in the call. Proposals will be categorized and subsequently selected for negotiations.

      2) Offerors should apply the restrictive notice prescribed in FAR 52.215-1(e) Instructions to Offerors—Competitive Acquisition.

      3) Technical/management and cost/business volumes should be submitted in separate volumes and must be valid for 180 days.

      4) Proposals must reference the announcement number (FA8650-19-S-1932) and call name/number and relevant technical area(s) of interest.

      5) Offerors must submit one (1) original and five (5) hard copies of their proposals to the Contracting POC.

      6) Offerors must include 2 CDs in Microsoft Office or Adobe format containing all electronic versions of required submittals. All electronic versions must match the hard copies. If there is a discrepancy between hard copies and electronic copies, the hard copies will take precedence. a) The cost file(s) spreadsheets must be in Microsoft Excel and include the formulas for calculating cost element bases (i.e., G&A, O/H, etc.) b) Technical / Management Proposal and Statement of Work must be provided in Microsoft Word c) The CDs should be labeled with the company name and proposal title.

7) Offerors are advised that only Contracting Officers are legally authorized to contractually bind or otherwise commit the Government.

8) The cost of preparing proposals in response to this ARA is not considered an allowable direct charge to any resulting or any other contract; however, it may be an allowable expense to the normal bid and proposal indirect cost as specified in FAR 31.205-18.

9) **No classified** technical proposals or cost volumes will be accepted.

b. **Technical / Management Proposal Solicited via Calls (One Step or RFP)**:

1) Page Limitations: The following describes proposal page limitations:

a) The Technical/Management Proposal shall be limited to (TBD per individual call) pages.

b) Font shall be standard 10-point business font Arial.

c) Character spacing must be "normal," not condensed in any manner.

d) Pages shall be double-spaced (must use standard double-space function in Microsoft Word), double sided (each side counts as one page), 8.5 by 11 inches, with at least one-inch margins on both sides, top and bottom.

e) All text, including text in tables and charts, must adhere to all font size and line spacing requirements listed herein. Font and line spacing requirements do not have to be followed for illustrations, flowcharts, drawings, and diagrams. These exceptions shall not be used to circumvent formatting requirements and page count limitations by including lengthy narratives in such items.

f) Pages shall be numbered starting with the cover page being Page 1, and the last page being no greater than Page (TBD per individual call). The page limitation covers all information including indices, photographs, foldouts (counted as 1 page for each 8.5 by 11 portion) tables, charts, appendices, attachments, resumes, etc.

g) The proposal page limit does not include the offeror's proposed Statement of Work (SOW); however, the same formatting rules apply to the SOW, which is limited to (TBD per individual call) pages.

NOTE: The Government will check the proposal and SOW for conformance to the stated requirements. Any pages in excess of the stated page limitation will not be considered for review purposes.

2) The Technical/Management proposal(s) shall include a discussion of the nature and scope of the technical approach. Additional information on prior work in this area, descriptions of available equipment, use of base support (if desired), data and facilities and resumes of personnel who will be participating in this effort should also be included as attachments to the technical proposal. This volume(s) shall include a SOW(s) detailing the technical tasks proposed to be accomplished under the proposed effort and suitable for contract incorporation. Do not include any proprietary information in the SOW. In addition to the contractor proposed SOW, a Government generated SOW Supplement containing additional contracting requirements will be included in any resulting contracts.

3) Any questions concerning the technical proposal or SOW preparation shall be referred to the Technical POC listed in Overview on page 3 of this solicitation.

c. **Cost/Business Proposal Solicited Via Calls (One-Step or RFP)**:

1) Separate the proposal into a business section and cost section. Adequate Price Competition is anticipated for each call.

a) The Model Contract for FAR-based contracts is provided as the attachment to this document. No sample is provided for Other Transactions. Note that this Model Contract provides examples of clauses that may be included in final contracts and provides a basic contract structure. Contracts that are ultimately awarded against the individual calls may vary based on individual program requirements, negotiated terms and conditions. Not all terms and conditions in the Model Contract are applicable to all calls/contracts.

b) The business section should contain all business aspects to the proposed contract, such as type of contract, any exceptions to terms and conditions of the Model Contract, any information not technically related, etc. Provide rationale for exceptions to any portion of the Model Contract.

c) Identify any technical data that will be delivered with less than unlimited rights.

d) Subcontracting Plans: For efforts to exceed $700,000, Subcontracting Plans shall be submitted in the cost/business proposal. Reference FAR 19.704, DFARS 219.704, and AFFARS 5319.704(a)(1) for Subcontracting Plan requirements. Small business concerns are exempt from this requirement.

e) Limitations on Pass-Through Charges: As prescribed in FAR 15.408(n)(1) & 15.408(n)(2), provisions 52.215-22, “Limitations on Pass Through Charges- Identification of Subcontract Effort (Oct 2009),” apply. Justification for exceeding the limits must be provided with the proposal.

f) Complete the Representations and Certifications (Section K - attached to this document) and submit with all proposals.

g) If an offeror proposes the use of Government Furnished Property (GFP), other than GFP identified in the call (if applicable), the offer must specifically identify each piece of GFP in the Cost/Business Proposal and propose and substantiate a rental cost for evaluation purposes in accordance with FAR 45.202. Include the following information in the proposal:

   i. A list describing all Government property that the offeror or its subcontractors propose to use on a rent-free basis. The list shall identify the accountable contract under which the property is held and the authorization for its use (from the contracting officer having cognizance of the property);

   ii. The dates during which the property will be used and, for any property that will be used concurrently in performing two or more contracts, the amounts of the respective uses in sufficient detail to support prorating the rent;

   iii. The amount of rent that would otherwise be charged in accordance with FAR 52.245-9, Use and Charges; and

   iv. The voluntary consensus standard or industry leading practices and standards to be used in the management of Government property, or existing property management plans, methods, practices, or procedures for accounting for property.

2) **Cost Element Breakdown:** Clear, concise, and accurate cost proposals reflect the offeror's financial plan for accomplishing the effort contained in the technical proposal. As a part of its cost proposal, the offeror shall submit the information outlined below, together with supporting breakdowns. All direct costs (labor, material, travel, subcontracts, etc.) as well as indirect costs (labor, overhead rates, etc.) should be provided by contractor fiscal year (CFY) and further summarized for the whole effort. In addition, costs should be broken down and summarized by each individual task area to allow for partial awards. Detailed cost element breakdowns by Government Fiscal Year or calendar year are not required. The supporting schedules may include summary level estimating rationale used to generate the proposed costs. The cost element breakdown(s) should include the following if applicable:

   a) **Direct Labor**: Direct labor should be detailed by number of labor hours by category of labor.

b) **Labor and Overhead Rates**: Direct labor hours, with applicable rates, must be broken out with bases clearly identified. The source of labor and overhead rates and all pricing factors should be identified. For instance, if a Forward Pricing Rate Agreement (FPRA) is in existence, that should be noted, along with the Administrative Contracting Officer's (ACO) name and telephone number. If the rates are based on current experience in your organization, provide the historical base used and clearly identify all escalation, by year, applied to derive the proposed rates. If computer usage is determined by a rate, identify the basis used and rationale used to derive the rate.

c) **Material/Equipment:** List all material/equipment items by type and kind with associated costs and advise if the costs are based on vendor quotes, data and/or engineering estimates; provide copies of vendor quotes and/or catalog pricing data.

d) **Subcontractor Costs**: Submit all subcontractor proposals and analyses with your cost proposal (See FAR 15.404-3(b)). If the subcontractor will not submit unsanitized cost and pricing information to the offeror, this information must be submitted directly to the Government for analysis. On all subcontracts and interdivisional transfers, provide the method of selection used to determine the subcontractor and the proposed contract type of each subcontract. An explanation shall be provided if the offeror proposes a different amount than that quoted by the subcontractor. The offeror's proposal must:

   i. Identify principal items/services to be subcontracted.

   ii. Identify prospective subcontractors and the basis on which they were selected. If non-competitive, provide selected source justification.

   iii. Identify the type of contractual business arrangement contemplated for the subcontract and provide rationale

   iv. Identify the basis for the subcontract costs (e.g., firm quote or engineering estimate, etc.).

   v. Identify the cost or pricing data submitted by the subcontractor.

   vi. Provide thorough analysis of the proposed subcontract(s) in accordance with FAR 15.404-3(b). Analysis should address the reasonableness, realism and completeness of <u>each</u> subcontractor's proposal. If the analysis is based on comparison with historical prices, identify the basis on which the historical prices were determined to be reasonable. The analysis should include, but not be limited to, an analysis of: materials, labor, travel, other direct costs and proposed profit or fee rates.

e) **Special Tooling or Test Equipment:** When special tooling, and/or test equipment is proposed, attach a brief description of items and indicate if they are solely for the performance of this particular contract or project and if they are or are not already available in the offeror's existing facilities. Indicate quantities, unit prices, whether items are to be purchased or fabricated, whether items are of a severable nature and the basis of the price. These items may be included under Direct Material in the summary format.

f) **Consultants:** When consultants are proposed to be used in the performance of the contract, indicate the specific project or area in which such services are to be used. Identify each consultant, number of hours or days to be used, and the consultant's rate per hour/day. State the basis and provide an analysis of the acceptability of the consultant's rate.

g) **Travel:** Travel costs must be justified and related to the needs of the project. Identify the number of trips, destination, and purpose. Travel costs should be broken out by trip with number of travelers, airfare, per diem, lodging, etc. Supporting documentation should be provided.

h) **Computer Use:** Detail the amount and kind of computer usage, the cost, and how the costs were derived.

i) **Facilities Capital Cost of Money:** If Facilities Capital Cost of Money is proposed, a properly executed DD Form 1861 is required.

j) **Project Funding Profile:** Offerors should include a project funding profile by Government Fiscal Year (GFY) (1 Oct through 30 Sept) for budgetary purposes. This will enable the Government to easily identify program funding needs by GFY.

k) If an offeror takes exceptions to the requirements called out in the announcement (e.g., base support, Government-Furnished Property, CDRLs), the exceptions should be clearly stated in the cost proposal.

l) **Forward Pricing Rate Agreements:** Offerors who have Forward Pricing Rate Agreements (FPRAs) and/or Forward Pricing Rate Recommendations (FPRRs) from DCMA should submit them with their proposal.

m) Cost/Business proposals have no page limitations.

V. White Paper/Proposal Review Information:

1. **White Paper - Review Criteria:** White papers will be reviewed to address whether they have the potential to meet the AF's needs based on the criteria below which are listed in equal order of importance, unless otherwise indicated in each individual call. Offerors will be notified of the results of the review.

   a. **Criteria:**

      1) The offeror's understanding of the scope of the technical effort.

      2) Soundness of the offeror's technical approach including whether the proposal demonstrates related experience and qualifications of technical personnel.

      3) Proposal's potential to advance technology and the state of the art and to meet mission and agency needs.

      4) The potential to transition the research and development deliverables to future Government needs. Any proposed restriction on technical data or computer software will be considered.

      5) Affordability (Proposed ROM Cost Estimate)

2. **Proposal - Peer or Scientific Review Criteria**: Proposals will be reviewed through Peer or Scientific Review using the criteria below, unless otherwise indicated in each individual call and/or RFP. The technical aspect, which is ranked as the first order of priority, shall be reviewed based on the following criteria that are of equal order of importance.

   a. **Technical Merit:**

      1) The offeror's understanding of the scope of the technical effort.

      2) Soundness of the offeror's technical approach including whether the proposal demonstrates related experience and qualifications of technical personnel.

      3) Proposal's potential to advance technology and the state of the art.

      4) The potential to transition the research and development deliverables to future Government needs. Any proposed restriction on technical data or computer software will be considered

   b. **Cost/Price:** The cost/price criterion includes the realism of the proposed cost. Cost/Price is a substantial factor, but ranked as the second order of priority. (If an offeror proposes the use of GFP other than any GFP identified in this BAA, and that proposed GFP provides the offeror an unfair competitive advantage, then FAR 45.202 requires rental equivalent be applied to the Cost Factor for evaluation purposes only).

3. **Proposal – Review and Selection Process:**

   a. **Categories:** Based on the Peer or Scientific Review, proposals will be categorized as Selectable or Not Selectable (see definitions below). The selection of one or more sources for award will be based on the Peer or Scientific Review, as well as importance to agency programs and funding availability.

      1) **Selectable:** Proposals are recommended for acceptance if sufficient funding is available

      2) **Not Selectable:** Even if sufficient funding existed, the proposal should not be funded.

   b. No other criteria will be used.

   c. Prior to award of a potentially successful offer, the Contracting Officer will make a determination regarding price reasonableness.

   NOTE: The Government reserves the right to award some, all, or none of proposals. When the Government elects to award only a part of a proposal, the selected part may be categorized as Selectable, though the proposal as a whole may not merit such a categorization.

VI. Award Administration Information:

1. **Award Notices:** Offerors will be notified whether their white paper is recommended to submit a full technical/cost proposal or whether the proposal is recommended for award on or about 30 days after receipt of the white paper/proposal. The notification is not to be construed to mean the award of a contract is assured, as availability of funds and successful negotiations are prerequisites to any award.
2. **Administrative and National Policy Requirements**: See Section I.
3. **Reporting:** See ARA Paragraph I.3.a., Contract Data Requirements List (CDRL).

VII. Other Information:

1. **Acquisition of Commercial Items:** Based upon market research, the Government is not using the policies contained in Part 12, Acquisition of Commercial Items, in this solicitation. However, interested offerors may identify to the Contracting Officer their interest and capability to satisfy the Government's requirement with a commercial item within 15 days of this notice.
2. **Support Contractors:** Only Government employees will participate in Peer or Scientific Reviews. Offerors are advised that employees of commercial firms under contract to the Government may be used to administratively process proposals, monitor contract performance, or perform other administrative duties requiring access to other contractors' proprietary information. These support contracts include nondisclosure agreements prohibiting their contractor employees from disclosing any information submitted by other contractors or using such information for any purpose other than that for which it was furnished.

3. **Item Unique Identification and Valuation.** It is DoD policy that contractors shall be required to identify the Government's unit acquisition cost for all deliverable end items for which Item Unique Identification applies. Therefore, proposals must clearly break out the unit acquisition cost for any deliverable items. See DFARS 211.274-3, Policy for Valuation, for more information. (Per DoD, "fully burdened unit costs" to the Government would include all direct, indirect, G&A costs, and an appropriate portion of fee). For more information, see the following website: http://www.acq.osd.mil/dpap/pdi/uid/index.html.
4. **Informal Feedback Sessions:** When requested, an informal feedback session will be provided. The process will follow the guidelines outlined in the notification letter.
5. **Pre-Award Clearance:** Pursuant to FAR 22.805, a preaward clearance must be obtained from the U.S. Department Of Labor, Employment Standards Administration, Office Of Federal Contract Compliance Program's (OFCCP) prior to award of a contract (or subcontract) of $10,000,000 or more unless the contractor is listed in OFCCP's National Preaward Registry http://www.dol-esa.gov/preaward. Award may be delayed if you are not currently listed in the registry and the Contracting Officer must request a preaward clearance from the OFCCP.
6. **Associate Contractor Agreements:** Associate Contractor Agreements (ACAs) are agreements between contractors working on Government contracts that specify requirements for them to share information, data, technical knowledge, expertise, or resources. The Contracting Officer may require ACAs when contractors working on separate Government contracts must cooperate, share resources or otherwise jointly participate in working on contracts or projects. Prime contractor to subcontractor relationships do not constitute ACAs. For each award, the Contracting Officer will identify associate contractors with whom agreements are required.
7. **Updates of Publicly Available Information Regarding Responsibility Matters:** Any contract or assistance award that exceeds $550,000; and when offeror checked "has" in paragraph (b) of the provision FAR 52.209-7, shall contain the clause/article, FAR 52.209-9 "Updates of Publicly Available Information Regarding Responsibility Matters (JUL 2013)."
8. **White Paper/Proposal Content Checklist:** You may be ineligible for award if all requirements of this solicitation are not met on the proposal due date.
    a. White papers/proposals are due to the Contracting POC.
    b. White papers/proposals are due no later than the due date and time specified in the call or letter RFP.
    c. White paper/proposal page limits are strictly enforced. See Section IV.2.b.1) and 3.b.1) of the solicitation for page limits.
    d. If a contract is proposed, completed Certifications and Representations (Section K) are required. See Section K, in the Model Contract as attached to this ARA announcement.

e. The Cost/Business Proposal must contain all information described in the Content and Form of Proposal Section.

f. For any subcontracts proposed, the Cost/Business Proposal must contain a subcontractor analysis IAW FAR 15.404-3(b).

g. Offerors other than small businesses are to include a subcontracting plan in Microsoft Word Readable Format on a CD ROM as well as a hard copy.

h. Proposals must be submitted in the format specified in Section IV.

i. Offerors who have Forward Pricing Rate Agreements (FPRA's) and Forward Pricing Rate Recommendations (FPRR's) should submit them with their proposal.

j. If the effort is subject to Export Control, offerors must submit a Certified DD Form 2345, Militarily Critical Technical Data Agreement, with proposal.

ATTACHMENT: Model Contract for FA8650-19-S-1932, to include:

- Contract Data Requirements List (CDRLs) DD Form 1423-1
- MINSAV Statement of Objectives
- Statement of Work Supplemental Requirements
- ANSI Standard Format Guidelines
- Standard Form (SF) 298
- DFARS PGI 204.7108 Payment Instructions
- Section K (Reps/Certs)
- Section L