Broad Agency Announcement (BAA)
Open Two-Step BAA and
BAA with Calls
11 May 2023

Overview Information

NAICS Code: The NAICS Code for this acquisition is:

541715 (Research and Technology in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)*, and the small business size standard is* ***1,000*** *employees.*

Federal Agency Name: Air Force Research Laboratory, Aerospace Systems Directorate, AFRL/RQ

Broad Agency Announcement Title: Pioneering Aerospace Capabilities, Engineering and Research (PACER)

Broad Agency Announcement Type: This is the Initial Announcement

Broad Agency Announcement Number: FA2391-23-S-2403
Catalog of Federal Domestic Assistance (CFDA) Number(s): 12.800 AIR FORCE DEFENSE RESEARCH SCIENCES PROGRAM

THIS IS A HYBRID SOLICITATION AGAINST WHICH WHITE PAPERS MAY BE SUBMITTED AND/OR CALLS WILL BE RELEASED. The BAA will remain open for White Papers and Calls until 10 May 2043.

1. **OPEN BAA (Two-Step, See Section IV for instructions):**

White papers may be electronically submitted at any time during the open period (other than during the "moratorium") to the PACER central inbox identified in the "Submission" Paragraph of the Overview Information. **For each Call that is announced pursuant to this BAA, there will be a "moratorium" beginning when the Call is published and continuing until six months after the due date for proposals, during which no white papers submitted covering the topic specified in the Call will be reviewed.** White papers will be reviewed and those selected for further consideration will result in a Request for Proposal (RFP). Due dates and times will be specified in each RFP. There will be no other announcement issued requesting white papers. Offerors should monitor the System for Award Management (SAM) website at https://SAM.gov in the event this announcement is amended.

First Step: WHITE PAPER DUE DATE AND TIME: **White Papers will be considered if received prior to 1500 EST on 10 May 2043.** Only white papers are due at this time.

Second Step: PROPOSAL DUE DATE AND TIME: To be provided in the RFPs sent to offerors that submit White Papers considered to meet the needs of the

Air Force (see Section IV.4.1).

2. CALLS (One-Step or Two-Step, See Section V for instructions):

Over the period of this BAA, Calls may be issued to request white papers or proposals for specific topic areas. It will be determined on a Call by Call basis whether or not the announcement is for white papers (two-step) or proposals (one-step). Each Call will contain specific requirements and pertinent information. White Papers/Proposals submitted in response to the Calls will be accepted as specified in the individual Calls and evaluated in accordance with the Proposal Review Information (Section V.4). Offerors should monitor the System for Award Management (SAM) website at https://SAM.gov in the event this announcement is amended or Calls are issued.

For ONE-STEP Calls

First Step: PROPOSAL DUE DATE AND TIME: To be provided in Calls.

For TWO-STEP Calls

First Step: WHITE PAPER DUE DATE AND TIME: To be provided in Calls.

Second Step: PROPOSAL DUE DATE AND TIME: To be provided in the RFPs sent to offerors that submit White Papers considered to meet the needs of the Air Force (see Section V.4.1).

NOTE: ***White Paper/proposal receipt after the due date and time shall be governed by the provisions of FAR 52.215-1(c)(3).***

Submission: ***Electronic submission is required.*** White Papers **must** be electronically submitted to the PACER central inbox, **AFRL.RQ.PACERBAA@us.af.mil**. Please contact the PACER central inbox if there are any issues submitting an electronic copy. White Papers submitted directly to AFRL/RQ Technical and/or Contracting POCs will not be reviewed. For Calls, the Technical and Contracting POCs and instructions for electronic submission will be identified in each individual Call.

Type of Contract/Instrument: The Air Force reserves the right to award the instrument best suited to the nature of research proposed. Accordingly, the Government may award any appropriate contract type under the FAR or Other Transaction (OT) for Prototype, grant, cooperative agreement, or OT for Research. The Air Force may also consider award of an appropriate technology transfer mechanism if applicable. It is anticipated that awards under this BAA will generally be cost reimbursement contracts (Cost Plus Fixed Fee, Cost or Cost Share). Cost reimbursement contracts require successful offerors to have an accounting system considered adequate for tracking costs applicable to the contract.

Estimated Program Cost: $500M ceiling on any individual award resulting from a white paper. $500M cumulative ceiling on all award(s) resulting from an individual Call.

Anticipated Number of Awards: The Air Force anticipates multiple awards for this announcement. However, the Air Force reserves the right to award zero, one, or more contracts for all, some or none of the solicited efforts based on the offeror's ability to perform desired work and funding fluctuations.

Brief Program Summary:
PACER BAA is a Two-Step Open BAA and BAA with Calls which will enable study efforts on novel concepts, as well as research and development efforts to mature specific technologies to appropriate technology readiness levels (TRL) depending on end use. Efforts under this BAA are intended to further AFRL/RQ's mission in pioneering transformative aerospace technologies for the warfighter's decisive advantage. Specific award details are described below, but the Government anticipates multiple awards of varying duration and value. This BAA allows consideration of White Papers as well as Calls issued by the Government when specific requirements are identified.

Communication Between Prospective Offerors and Government Representatives: Dialogue between prospective offerors and Government representatives is encouraged until submission of proposals. All exchanges with offerors after proposal submission shall go through the Contracting POC. Discussions with any of the points of contact shall not constitute a commitment by the Government to subsequently fund or award any proposed effort. Only Contracting Officers are legally authorized to commit the Government.

Address Technical and Contracting questions to: PACER central inbox, AFRL.RQ.PACERBAA@us.af.mil

Full Text Announcement

I. Program Description (Applicable to both Open Two-Step BAA and Calls; future Calls may be either One-Step or Two-Step Calls): Air Force Research Laboratory, Aerospace Systems Directorate, AFRL/RQ, Wright-Patterson Air Force Base is **only soliciting white papers** (and later technical and cost proposals) **under the Open BAA on the following research efforts at this time:**

1. Statement of Objectives:

The PACER BAA will enable study efforts on novel concepts, as well as research and development efforts to mature specific technologies to appropriate technology readiness levels (TRL) depending on end use. Efforts under this BAA are intended to further AFRL/RQ's mission in pioneering transformative aerospace technologies for the warfighter's decisive advantage.

AFRL/RQH High Speed Systems Technology Development: This technology area seeks to research, develop, demonstrate and validate advanced technologies and capabilities for high-speed aerospace vehicles. These technologies enable the analysis, test, assembly and successful operation of aerospace platforms in Mach 3+ flight regimes, as well as in environments leading to and from the operating condition(s). The breadth of technology includes: fundamental science, research and development of high-speed systems and components utilizing advanced analysis techniques, ground and flight test. This technical area also focuses on developing subsystems, advanced test methods, system studies, and integration of technologies into flight demonstration vehicles using appropriate model-based engineering approaches. The high-speed systems research and development technology areas include the following topics:

Topic 1 – Aero-Structures: Research and develop aerodynamic, material, structural, and thermal management concepts, methods and designs to improve high speed structures performance. Efforts are focused on aerodynamic and structural interactions throughout a high-speed vehicle's mission including single flight and reusable systems. Improvements of high-speed structures performance can be achieved through applications of new material, structural, and thermal management concepts. Structural technologies can be validated through demonstration flights, vehicle design, experimental research, associated test methods and instrumentation, predictive and diagnostic analysis methods, and modeling and simulation.

Topic 2– Propulsion Technologies: Research and develop propulsion systems to enable high-speed flight, such as: Scramjet, ramjet, combined cycle, advance propulsion concepts, innovative propulsion concepts, air launch and ground launch, expendable and reusable, and integrated design studies. This research would be conducted on concepts of varying sizes and scales. Areas of interest include but are not limited

to: advanced testing methods, analysis, aero-propulsion integration, characterization of inlet and nozzle flow fields, additive manufacturing techniques, advanced fuel development, and efficient combustion techniques. Experimental and computational research challenges associated with sustained combustion in supersonic flows used to evaluate prototype and early development concepts associated with high-speed air breathing propulsion components, fuels, and systems.

Topic 3 – Vehicle Integration and Analysis: Research and development to facilitate the design, analysis, and integration of high-speed systems into reliable configurations of expendable/reusable, manned/unmanned, hypersonic vehicles. Robust model-based systems engineering and digital engineering approaches should be utilized to support the requirements, design, analysis, verification, and validation associated with the development of high-speed systems. Areas of interest include vehicle conceptual design, multidisciplinary modeling and analysis, mission/performance analysis, military utility analysis (including warfighter/stakeholder engagement), concept of operations development, structural design, payload integration, and the collection of coherent sets of validation data in hypersonic flight environment through flight experimentation.

Topic 4 – Experimental Sciences: Research and develop components and diagnostics for high-speed systems/subsystems and their integration into air vehicles, weapons and launch systems. Efforts should focus on high-speed flow physics, flow over control surfaces and wing-body junctures, boundary-layer (BL) transitions, exploiting shock-shock/shock-BL interactions, and fluid-thermal-structure interactions. Development of flight worthy sensors and expansion of state of the art in experimental methods to advance high-speed propulsion, structural, and external aerodynamics investigations

AFRL/RQQ Power and Controls Technology Development and Demonstration: This technology area focuses development and demonstration of technologies and integrated systems for aerospace applications, which enhance the mission capabilities, vehicle performance or efficiency, autonomy and teaming of current or future military air vehicles.

Topic 5 – Autonomous Control Branch: Discovery, development, and demonstration of integrated aerodynamic technologies that enable revolutionary capabilities for future military air vehicles. Technologies include, but are not limited to, cooperative control of unmanned aerial vehicles, optimization under uncertainty, verification and validation of complex systems, high speed/hypersonic platforms, and aircraft flight control, thermal management, and fault tolerance.

Topic 6 – Control Systems: Autonomous control technologies to make autonomous aerospace systems the preferred option for any joint mission. These technologies include, but are not limited to, autonomous collaboration and manned-unmanned teaming; autonomous safety systems; mission autonomy and intelligence; and autonomy test and

evaluation.

Topic 7 – Electrical Systems: Technologies for aerospace power generation, energy storage, power distribution and intelligent power management, protection, and control. This includes, but not limited to, affordable power generation, high impedance arc fault detection, wide temperature solid state batteries, EMI suppression techniques, and advanced power control to name a few.

Topic 8 – Flight Systems Integration: Focus on analysis, development, and demonstration of advanced technologies and integrated systems that provide new capabilities, capability enhancements, or increase air vehicle performance and efficiency as new capabilities to address current or projected warfighting shortfalls. Technologies may be applicable to: a) air vehicles of all classes and speed regimes accomplishing any military mission germane to current, emerging or envisioned Air Force missions; b) enhance air vehicle energy state awareness and coordination of internal vehicle systems, subsystems, and components for improved vehicle capability; c) tools, techniques and analysis for the system-level modeling, digital engineering, and hardware emulation of aircraft power and thermal management, including interactions with the platform and engine.

Topic 9 – Mechanical & Thermal Systems: Analysis, development, maturation and demonstration of advanced aerospace technology concepts, at the subsystem or system level. Focus on technologies to improve reliability and/or cost of electrical to mechanical energy transfer components as well as subsystem/system improvements in thermal acquisition, transport and rejection. Emphasis includes, but is not limited to fundamental thermal sciences, two-phase material applications, adaptive and hybrid thermal cycle systems, and hi-power, low duty cycle thermal management. Also of specific interest are technology improvements for electric actuation, power generation and thermal management for hypersonic platforms, solid-state power generation, advanced magnetic materials, and multi-scale modeling and simulation for these electromechanical/thermal systems.

AFRL/RQS Systems Analysis Technology Development: This technology area develops advanced modeling and simulation methods and tools to provide high-fidelity DAF mission analysis. It utilizes high-performance mission analysis to assess the potential benefits of new or emerging technology in complex and dynamic battlespace environments. It adapts and advances digital engineering techniques for research and development (R&D) applications. The systems analysis technology development area includes the following topics:

Topic 10 – Science of Modeling, Simulation, and Analysis (MS&A): Advances MS&A tools and techniques for technology R&D applications. MS&A tool development includes, but is not limited to, agile software development and delivery processes, simulation framework development, support toolset development, model creation, and scenario development.

Topic 11 – Aerospace Systems MS&A: Utilizes MS&A to define technology and capability requirements. Evaluates the military utility of technological concepts and capabilities in future, multi-domain warfare environments. The scope of work includes engineering-level (i.e., system, subsystem, and component), engagement-level (i.e., one-on-one and many-on-many), mission-level (i.e., groups of systems and force packages), and campaign-level MS&A activities and wargames utilizing constructive, virtual, or live simulation. The scope also includes business and cost analysis on future technology concepts.

Topic 12 – Digital Engineering for R&D Applications: Adapts and advances digital engineering techniques to build digital capabilities to support MS&A-informed strategic investment planning and decision making. This includes, but is not limited to, establishing a digital interface among the RQ technical divisions to help define requirements for repositories, processes, toolchains, and integrated digital environments that enable online collaboration amongst all stakeholders

AFRL/RQT Air-Breathing Engine Technology Development: AFRL/RQT seeks to design, develop, demonstrate, and transition advanced propulsion, power, and thermal technologies that provide disruptive improvement in affordable mission capability. This approach extends to a range of legacy, emerging, and future military propulsion, power, and thermal technology needs in multiple applications. Technology objectives aim to reduce development, production, and maintenance costs and timelines; increase fuel efficiency; increase propulsive capability; and integrate system propulsion, power, and thermal management. White Papers or Proposals shall address how the proposed technology will impact the systems into which it will be incorporated and explain what current system challenge(s) the technology is overcoming.

The Turbine Engine Division research and development technology areas of interest include the following topics:

RQT Topic 13 – Affordability: Research, development, demonstration, and validation of technologies or approaches that increase cost effectiveness and reduce development timelines for turbine engine-related applications. This could include, but is not limited to, new design approaches, novel manufacturing techniques, innovative component design and material application, and reduced logistics support.

RQT Topic 14 – Future Enabling Air Breathing Propulsion: Research, development, demonstration, and validation of technologies or approaches that will enhance the capability, performance, endurance, and reliability of advanced air breathing propulsion for military applications. This could include, but is not limited to, high payoff engine concepts and components with novel architectures, integrated thermal management, advanced design tools with mission-specific Multi-Disciplinary Analysis and Optimization (MDAO) and Model-Based Systems Engineering (MBSE) tools for Digital Engineering, and

concepts tailored to enable effectiveness for crewed and uncrewed weapons systems.

AFRL/RQV Air Vehicle Technologies Development and Demonstration: This technology area focuses on technologies, at all levels of maturity, which enhance the performance or efficiency of current or future military air vehicles of any class or mission. Performance and efficiency may be of any measure, to include metrics of cost. Across the area of interest, the use and advancement of models-based systems engineering and other digital engineering principles and practices to rapidly advance the state of the art, accelerate maturation and enhance the transitionability of the subject technology products is of paramount interest.

Topic 15 – Aerodynamic Technologies: Discovery, development, validation, and demonstration of integrated aerodynamic technologies that enable revolutionary capability for future military air vehicles. This area seeks to discover and understand aerodynamic and fluid dynamic processes using foundations of theory, experiment, simulation, and analysis. This knowledge is then used to support the design, analysis and demonstration of new aerodynamic technologies and components, and their integration on military air vehicles.

Topic 16 – Airframe Structures: Drive step function improvements in cost, life, performance, and time to market of tomorrow's military aircraft structures. Develop technologies to enable affordable yet capable limited life structures for attritable aircraft concepts, including new approaches to airworthiness certification. Develop innovative structural concepts, materials and manufacturing methods that can dramatically reduce airframe weight and/or manufacturing cost for all classes of air vehicles. Explore concepts for multifunctional structures (electrical, thermal, power, etc.) for all sizes of aircraft. Understand structural aspects of morphing and adaptive structures that can eliminate the use of conventional articulated surfaces and enable multi-state flight performance optimization. For all applications, develop the accompanying structural test and analysis methods, particularly with regard to their application to digitally-based aircraft structural design, certification and health monitoring / failure prediction.

Topic 17 – Multidisciplinary Design, Analysis and Optimization (MDAO): Discover, develop and demonstrate MDAO methods and technologies to enable next-generation aerospace vehicles and provide Air Force decision makers risk-quantified effectiveness assessments of concepts and technologies. Areas of interest include but are not limited to multidisciplinary, multi-fidelity system level effectiveness based design optimization, risk-quantified multi-fidelity coupled analyses and sensitivities, goal oriented adaptive analyses, risk-quantified gradient and non-gradient based design space exploration including machine learning, physics- and statistics-based Reduced Order Models (ROMs), optimization methods, uncertainty quantification methods, model based systems engineering, robust model construction methods, data assimilation methods, digital engineering design methods,

multidisciplinary technologies (such as active aeroelastic wing, active flutter suppression, multifunctional structures, etc..), additive manufacturing for design and testing, and experimental validation via ground or flight testing.

Topic 18 – Development and Demonstration of Advanced Military Air Vehicle Capabilities: Analysis, development, maturation and demonstration of advanced technology concepts, at the subsystem or system level. Of interest are both technologies integrated onto existing Air Force weapon systems as capability enhancements and into new systems as new capabilities to address current or projected warfighting shortfalls. Technologies may be applicable to air vehicles of all classes and speed regimes accomplishing any military mission germane to current, emerging or envisioned Air Force missions.

Security: It is expected that during the development and demonstration of technologies supporting the AFRL high speed portfolio that information will be used or generated up to the level of Top Secret, Sensitive Compartmented Information (TS/SCI).

The contractor shall train personnel in, and follow appropriate Operations Security (OPSEC) measures during the performance of these research activities.

OPSEC: Operations Security (OPSEC) must be an integral part of our daily activities. As we maintain security on our future technologies that are vital to national interest, we must recognize and prepare for the threat poised against our technology. Department of Defense policies mandate a high degree of security throughout the acquisition process. However, heightened security awareness and threat-based countermeasures are particularly essential during the research and development phase when our technology is most vulnerable to espionage, sabotage, or exploitation. It is the obligation of each employee or persons involved on this contract to be constantly aware of and strictly adhere to security requirements designed to protect sensitive unclassified and other information and resources produced by acquisition, research and development, and technological security efforts outlined in this BAA. The contractor shall ensure employees receive training and follow appropriate Operations Security (OPSEC) measures during the performance of the contract.

Safety: The contractor shall consider system safety requirements when developing these identified technologies/technical objectives. (Ref: Military Standard (Mil-Std 882E Department of Defense Standard Practice System Safety)). The system safety process is to identify and document any system safety hazards introduced during all phases (e.g., planning, design, fabrication and testing) and recommend adequate risk mitigations to either eliminate the identified safety risk or minimize them to acceptable risk level. The design goal shall be to eliminate all hazards. Any residual hazards and subsequent design risk shall be summarized and provide enough detail to support an informed program management decision with regard to the design's overall safety risk. The contractor shall conduct an evaluation or assessment of these technologies and recommends appropriate system safety task(s) to be conducted in the appropriate technical objectives.

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 which increase overall contract ceiling amount and modifications under authority of DFARS 235.006-71.

3. Deliverable Items: Applicable Contract Data Requirements Lists (CDRL) data items will be identified in each Request for Proposal submitted during the Open Period and in each Call. Potential deliverables include, but are not limited to:
   a. Data Items: [See Attachment 6 CDRLs]

   A001 – Scientific and Technical Reports (Final Report) – End of Tech Effort
   A002 – Funds and Man-hour Expenditure Report – Monthly
   A003 – Contractor Spend and Expenditure Plan - Monthly
   A004 – Contract Funds Status Report (CFSR) – Quarterly
   A005 – Status Report – Monthly
   A006 – Presentation Material – As Required
   A007 – Technical Information Report – SF 424 Annual Update – Annually
   A008 – Computer Software Product – As Generated
   A009 – Test Plan – As Required
   A010 – Material and Processing Digital Data Package –As Generated
   A011 – System/Subsystem Design Description – As Generated
   A012 – Technical Data Package – As Generated

   b. Software: Software deliverables are anticipated under this program. Specific software deliverable requirements may be included in each RFP submitted during the Open Period and in each Call.

   c. Hardware: Hardware deliverables are anticipated under this program. Specific hardware deliverable requirements may be included in each RFP submitted during the Open Period and in each Call.

   d. Other: Other deliverables may be required depending on the requirements and will be identified in each RFP submitted during the Open Period and in each Call.

4. Schedule:
   a. Overall effort: It is anticipated that the period of performance for individual awards will vary between 12 and 36 months with an additional 3 months for final report submittal. However, period of performance will be addressed in each RFP submitted during the Open Period and in each Call.

   b. Data Items: The contractor shall provide deliverables in compliance with the CDRLs, DD Form 1423-1, as specified in each RFP or Call.

c. Software: The contractor shall meet specific software deliverable requirements as specified in each RFP or Call.

d. Hardware: The contractor shall meet specific hardware deliverable requirements as specified in each RFP or Call.

5. Other Requirements:

a. This announcement incorporates FAR and supplement provisions and clauses by reference. The full text of provisions and clauses can be found at Acquisition.gov.

b. Program Security Classification: Technical work will be conducted at no greater than TOP SECRET/ Sensitive Compartmented Information (TS/SCI). A sample DD Form 254 is attached (Attachment 7). If classified material is involved, a TOP SECRET facility and storage clearance will be required, and the proposal should discuss appropriate personnel and facility clearances. Additionally, if a DD254 is applicable, offerors must verify their Cognizant Security Office information is current with Defense Counterintelligence and Security Agency (DCSA) at www.dcsa.mil.

c. OPSEC: See I.1. (above) for OPSEC guidance.

d. Export Control: Information involved in this research 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 may be 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)" shall be contained in ALL resulting contracts.

f. Contractor Performance Assessment Reporting System (CPARS): To be determined (TBD) per individual Call/Award. In accordance with FAR 42.1502 and DFARS 242.1502 (and CPARS Guide, Section B, 2.0), past performance evaluations are required for R&D efforts funded with Budget Activity 6.4+ funds and having a value greater than $1M, where 6.4+ type effort is the preponderance. If CPARS is determined to be applicable, 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 *(at a minimum)*. 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.

g. Science and Technology (S&T) Protection: In accordance with Air Force Research Laboratory Instruction (AFRLI) 61-113, *"Science and Technology (S&T) Protection for the Air Force Research Laboratory"*, offerors are required to submit the following as part of their proposal:

1) A completed initial Standard Form (SF) 424, *Research and Related Senior/Key Person Profile (Expanded) Form*, (Attachment 9) for all Senior/Key Personnel proposed in support of the AFRLI 61-113 Personnel Risk Assessment requirement.

2) Documentation of a Security Program Plan in support of the AFRLI 61-113 Initial Institution S&T Protection Program Review requirement. This must include, at a minimum, a completed Security Program Questionnaire (Attachment 10). Submittal may also include a pre-existing plan that that the offeror uses as a matter of course or plan developed specifically for this acquisition. The purpose of requesting the plan is to assess the offeror's capacity for protection of the Government's S&T. Failure to demonstrate a plan adequate to meet the needs of the requirements, as determined by the Government in its sole discretion, may be grounds for considering the proposal unawardable.

<u>Government Procedures</u>

The Government will review the submitted S&T protection documentation only for those proposals categorized as Selectable and selected for funding and negotiations.

S&T Protection Initial Risk Review:

- Personnel Risk Assessment: The Government will review non-government research key/senior performers identified by the offeror on the initial SF 424 for workload conflicts and conflicts of interest.
- Initial Institution S&T Protection Program Review: The Government will review the offeror's security program information submitted in accordance with paragraph 2 of this section (above) to identify any potential risks and ensure appropriate measures are in place to protect S&T information.

The Government may require the offeror to submit additional information and/or a mitigation plan for any identified S&T protection risks. If the Government determines the offeror failed to provide adequate additional information; or an acceptable mitigation plan; or it is determined the offeror's S&T protection approach is high risk and does not provide adequate protection of S&T information, the Government may reject the proposal and withdraw it from consideration for award.

S&T Protection Annual Risk Review: In accordance with Attachment 8 (SOW Supplemental Requirements), the Contractor shall provide an SF 424 with the following information: 1) an initial report of all Senior/Key Personnel at the time of award; 2) an annual report of all Senior/Key Personnel providing support; and 3) a report for any new Senior/Key Personnel who join the contract, agreement, grant, or OT. Any updated SF 424s for new Senior/Key Personnel supporting the award require coordination from the Government prior to the contractor employee receiving access to S&T information. The purpose of this report is oversight and should not be construed as relieving the contractor/recipient of any S&T Protection requirements within the contract, grant, agreement, or OT.

6. Other Information:

a. Government Furnished Property (GFP) Availability: GFP is not anticipated to be made available under any resulting contract. It may be requested in the offeror's White Paper, and must clearly be identified in the Proposal. For Calls, any GFP should be clearly identified in the White Paper and/or Proposal.

b. Base Support/ Network Access: Base support may be proposed.
   (1) Available Base Facilities: Various test facilities at Wright-Patterson AFB and Arnold Engineering Development Center. A list of base facilities is available upon request to the PACER central inbox.

c. Data Rights Desired:
   (1) Noncommercial Technical Data: To Be Determined
   (2) Noncommercial Computer Software (NCS): To Be Determined
   (3) NCS Documentation: To Be Determined
   (4) Commercial Computer Software Rights: To Be Determined

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 noncommercial technical data and NCS developed or delivered under this contract are of significant concern to the Government. The Government will therefore evaluate any restrictions on the use of noncommercial 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 accordance with DFARS 252.227-7013(b)(1) and 252.227-7014(b)(1), the Government shall receive unlimited rights in all noncommercial technical data and computer software developed

exclusively with Government funds.

In accordance with DFARS 252.227-7013(b)(2) and DFARS 252.227-7014(b)(2), the Government shall receive Government Purpose Rights (GPR) in all noncommercial technical data and computer software developed with mixed funding. "Developed with mixed funding" means, "development was accomplished partially with costs charged to indirect cost pools and/or costs not allocated to a government contract, and partially with costs charged directly to a government contract." Offerors that propose delivery of noncommercial technical data, NCS, or NCS documentation subject to GPR should fully explain how a portion of the data was developed at private expense. Specifically, offerors must explain what noncommercial 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 noncommercial technical data with Limited Rights, NCS with Restricted Rights, or NCS documentation with Limited Rights will be considered. Proposals should fully explain what noncommercial 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 the technical data or computer software to be delivered and the associated item, component, or process developed exclusively or partially at private expense to which it pertains. Nonconforming data rights assertion lists will not be accepted until submitted in accordance with DFARS 252.227-7017.

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):

If any such software, noncommercial or commercial, is not reasonably identifiable at proposal submission, it must still be approved by the

contracting officer prior to incorporation. This obligation to obtain pre-approval by the contracting officer, as described above, continues throughout contract administration.

Noncommercial Computer Software:

DFARS 252.227-7014(d) describes requirements for incorporation of third party noncommercial copyrighted computer software and computer software documentation and is incorporated as follows: The Contractor shall not, without the written approval of the Contracting Officer, incorporate any copyrighted computer software or computer software documentation in the software or documentation to be delivered under this contract unless the Contractor is the copyright owner or has obtained for the Government the license rights necessary to perfect a license or licenses in the deliverable software or documentation of the appropriate scope set forth in DFARS 252.227-7014(b), and prior to delivery of such—

(1) Computer software, has provided a statement of the license rights obtained in a form acceptable to the Contracting Officer;

or

(2) Computer software documentation, has affixed to the transmittal document a statement of the license rights obtained.

In addition, all noncommercial computer software will receive the appropriate level rights set forth in DFARS 252-7014(b), which could include: Unlimited rights, GPR, Restricted Rights, or specifically negotiated license.

Commercial Computer Software:

For commercial computer software, the Government will neither accept nor execute a DD Form 250 for such software deliverables until the Contractor obtains from all third party software suppliers and/or vendors (Licensor) licenses for any commercial computer software to be delivered that are consistent with Federal Statutes, Federal Case Law, and Federal Regulations.

The following is a non-exhaustive list of terms and conditions which are inconsistent with Federal law and shall not be included in the commercial computer software license agreement between the Licensor and the Government:

1. The license shall not subject the Government to a contingent liability or a liability that is indefinite or indeterminate, including but not limited to: indemnification clauses, unilateral price increases, the right to attorney fees, automatic assessment of charges, or automatic

renewal provisions. These provisions constitute obligations in advance or in excess of an appropriation and violate the Anti-Deficiency Act.

2. The license shall be governed by Federal Statutes, Federal Case Law, and Federal Regulations, and shall not be subject to the laws or jurisdiction of any municipality, state, or foreign country. The license shall not bind the Government to litigation in a particular forum or venue or require the Government to participate in arbitration.

3. 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.

4. The Licensor shall not have the authority to unilaterally terminate the license. All remedies available shall be consistent with the Disputes and Termination Clauses in the underlying basic contract.

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

6. The Licensor shall not have the authority to control or otherwise influence any litigation between a third party and the Government. The United States Department of Justice has the sole authority to represent the Government in all litigation matters.

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

8. The license shall not require automatic updates or give Licensor the authority to unilaterally replace the software.

[*IF APPLICABLE*] Additionally, the Contractor may be required to obtain licenses that comply with the following terms and conditions, based on the Government's needs:

1. [*IF APPLICABLE*] The license shall not disclaim all warranties through use of an "as is" provision.
2. [*IF APPLICABLE*] The license shall neither restrict the Government from using the product at various sites nor limit use of the product by various Government agencies or third parties performing work on behalf of the Air Force under the [PROGRAM NAME]. In performance of the [PROGRAM NAME], Government personnel as well as Government contractors may use the software, subject to any negotiated limits on number of users, as applicable.
3. [*IF APPLICABLE*] [The license shall not limit the Government's use of the software at other Government and Government contractor sites.] [The license shall authorize the Government to use the software at the following sites: [list].

4. [*IF APPLICABLE*] The license shall not restrict the Government from copying or embedding elements of accessible code into other applications (e.g., nesting code, derivative works).

The Contractor may obtain agreement from the Licensor to insert the clause below in its respective software licenses intended to be transferred to the Government:
"In the event that any of the provisions of the [Software License] are determined to be inconsistent with Federal law or do not otherwise satisfy the Government's needs, the parties to the [Software License] hereby agree that such provisions shall be null and void as they pertain to the Government. Specifically, the following sections are hereby deleted from the [Software License] [and/or amended as indicated below]:
[Section X: deleted; Section Y: amended as follows […]"

If the Licensor will not agree to the terms and conditions cited herein and/or as contained in DFARS 227.72, the Contractor shall retain the current license on behalf of and for the benefit of the US Government if permissible under its license and such use will not subject the Government to the terms of the license. If the software in question is required to be delivered to the Government, the Licensor must grant the Government a sublicense that allows the Government to use the software to meet its requirements.

The Contractor shall provide documentation to clearly correlate or map any commercial computer software to be delivered to:

a) Contract Line Item Numbers (CLINS);
b) Contract Deliverables (CDRLS);
c) Paragraphs in the statement of work (SOW); and
d) Portions of any functional block diagrams and/or system architecture diagrams, so that it can be readily determined where certain commercial computer software corresponding to certain software license agreement(s) are physically located on the system to be delivered under the contract.

II. Award Information (Applicable to both Open Two-Step BAA and Calls)

1. **Anticipated Award Date:** This is a 20 (twenty) year BAA. White papers may be submitted at any time during this period **(except during Moratorium, if applicable)**; the white papers may result in the Air Force requesting proposals which would result in awards at any time during this 20 (twenty) year period. Over the 20 (twenty) year period, Call announcements may be issued to the System for Award Management (SAM) to request

proposals for specific research efforts. Awards are anticipated as a result of these Calls.

2. **Anticipated Funding for the Program:** Individual awards resulting from a white paper are not anticipated to exceed $500M per effort, and total awards under an individual Call are not anticipated to exceed $500M per Call; however there is no pre-defined minimum or maximum. Anticipated funding includes future year funding that has not been appropriated as of the release of this BAA. No award will be made under this solicitation until funds are available by appropriate budgeting agencies. The Government reserves the right to cancel this solicitation at any time. The Government has no obligation to reimburse an offeror for any costs related to responses to this solicitation (i.e. white papers or proposals). Each Call will have funding profiles specific to that effort. However, similarly, all offerors should be aware that due to unanticipated budget fluctuations, funding in any or all areas may change with little or no notice.

III. Eligibility Information (Applicable to both Open Two-Step BAA and Calls)

1. **Eligible Offeror**: This is an unrestricted solicitation. Small businesses are encouraged to propose.

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 PACER central inbox identified in the BAA. 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 Nationals (FNs) can be employed by a US

Prime Contractor (or Recipient) or Sub-contractor (or Sub-awardee); however, FNs will be limited to Public Domain information unless the recipient has obtained the proper License of Technical Assistance Agreement that authorizes disclosure of CMI and/CUI to foreign entities pursuant to the Department of State's International Traffic in Arms Regulations (ITAR) or Department of Commerce's EAR.

b. Export Control: This acquisition involves data that are subject to export control laws and regulations. Only contractors who are registered and certified with the Defense Logistics Agency and have a legitimate business purpose may participate in this solicitation. Contact the U.S./Canada Joint Certification Program Office, Defense Logistics Agency, Logistics Information Services J34, HDI Federal Center, 74 Washington Avenue N., Battle Creek, Michigan 49037-3084, (1-800-352-3572) or the Joint Certification Program Office (JCO) at JCP-Helpdesk@dla.mil 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.

c. Number of Proposals: There are no limits on the number of white papers/proposals an offeror may submit.

d. Eligibility: You may be ineligible for award if all requirements of this solicitation are not met on the white paper (and later proposal) due date as identified above.

IV. OPEN TWO-STEP BAA SECTION (This is a Two-Step process)

1. **Overview**: The Open Period consists of a Two-Step Process described in detail below. White Papers/Proposals submitted shall be in accordance with this announcement. *There will be no other solicitation issued in regard to this requirement.* The Government intends to review white papers/proposals and award some, all, or none of the proposals received without negotiation/discussion; however, the Government reserves the right to negotiate with the offeror(s) whose proposal is selected for funding.

   ONLY WHITE PAPERS ARE BEING SOLICITED AT THIS TIME.

   Offerors should be alert for any BAA amendments that may permit extensions to the white paper submission date.

   For additional information, a copy of the Broad Agency Announcement (BAA) Guide for Industry is located at https://www.afrl.af.mil/Portals/90/Documents/HQ/BAA%20Ind%20Guide%202020.pdf?ver=7AivkWvoUoptKgypgCuIvw%3d%3d

2. **White Paper Instructions (STEP ONE):**

   a. General: The *FIRST STEP* requests a white paper and a rough order of magnitude (ROM) cost. 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 FIRST STEP White Paper Review Criteria, set forth in Section IV.4.1. below. Based on this review, the Government will determine whether the white paper has the potential to best meet the Air Force's needs. Offerors will be notified of the disposition of their white paper. An email response will be sent notifying offerors that their white paper has been received. If an offeror does not receive written communication from the Contracting Officer requesting a proposal within approximately 180 days, the government is not interested in pursuing the white paper. Please note: 180 days is a notional timeframe and could be longer based on the government white paper review cycle. Those offerors submitting white papers assessed as meeting Air Force needs will be asked to submit a technical proposal. An offeror submitting a proposal without first submitting a white paper **will not** be eligible for an award. The cost of preparing white papers in response to this Solicitation 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.

Offerors should submit an electronic copy of the White Paper to the Email address identified in the "Submission" Paragraph of the Overview Information. Please reach out to the PACER central inbox identified in the "Submission" Paragraph if there are any issues submitting an electronic copy. *White Papers submitted directly to AFRL/RQ Technical and/or Contracting POCs will not be reviewed.*

For each CALL that is announced pursuant to this BAA (see Section V below), there will be a "moratorium" beginning when the call is published and continuing until six months after the due date for proposals, during which no white papers submitted covering the topic specified in the call will be reviewed.

b. Page Limitation: The White Paper shall be limited to **5** pages, prepared and submitted in Word format. Font shall be standard 10-point business font Arial. Character spacing must be "normal," not condensed in any manner. Pages shall be double-spaced (must use standard double-space function in Microsoft Word), 8.5 by 11 inches, with at least one-inch margins on both sides, top and bottom. 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, diagrams, cover page, table of contents, and restrictive/proprietary markings (in header or footer). These exceptions shall not be used to circumvent formatting requirements and page count limitations by including lengthy narratives in such items. Pages shall be numbered starting with the cover page being Page 1, and the last page being no greater than Page 5. 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. The Government will not consider pages in excess of these limitations.

c. Format: The white paper will be formatted as follows:

1) Section A: BAA Number, Title of Program, Topic Number, Name of Company, Business Size, Company's Commercial and Government Entity (CAGE) number, Dun & Bradstreet (D&B) Data Universal Numbering System (DUNS) number, Unique Entity Identifier (UEI) number, Contracting POC and Technical POCs with appropriate telephone numbers, and email addresses for the POCs. For submissions that will result in classified work, add the following information: Classified level at which company is cleared, contractor address for forwarding classified material (name, address, zip code), cognizant security office (name, address, zip code), and offeror's security officer's name and telephone number).
2) Section B: Period of Performance and Task Objectives;
3) Section C: Technical Summary and Proposed Deliverables; and
4) Section D: Cost of Task (Rough Order of Magnitude (ROM))

d. Technical Portion: The technical portion of the white paper shall include a discussion of the nature and scope of the research and the offeror's proposed technical approach/solution. It may also include any proposed deliverables. Resumes, descriptions of facilities and equipment, and a proposed Statement of Work are not required at this point.

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

f. 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).

g. 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 (STEP TWO):

Note: If you intend to submit a proposal for an assistance instrument, go to Attachment 1 which discusses how to prepare the cover page, and complete the certification.

a. General Instructions:

1) The SECOND STEP consists of offerors submitting a technical proposal within 30 calendar days of an RFP. After receipt, proposals will be evaluated in accordance with the award criteria in Section IV.4.2. below. 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. Offerors should

consider proposal instructions contained in the Broad Agency Announcement (BAA) Guide for Industry, which can be accessed on line at https://www.afrl.af.mil/Portals/90/Documents/HQ/BAA%20Ind%20Guide%202020.pdf?ver=7AivkWvoUoptKgypgCuIvw%3d%3d.
This guide is specifically designed to assist the offeror in understanding the BAA proposal process.

3) Technical/Management and Cost/Business volumes should be submitted in separate volumes and must be valid for at least 180 days. Offerors must state this on the cover page of each volume of their proposal.

4) Proposals must reference the announcement number FA2391-23-S-2403, and the relevant Topic Number.

5) Offerors must submit one electronic copy of their proposals per the directions in the Request for Proposal. Please contact the Contracting POC identified in the RFP if there are any issues submitting an electronic copy.

   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.)

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

7) The cost of preparing proposals in response to this BAA 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.

8) **No classified technical proposals or cost volumes are expected. Offerors are encouraged to keep all elements of the proposal package unclassified.** In the rare case where an offeror has a need to submit a classified appendix, please contact the Technical POC for delivery instructions.

b. Technical/Management Proposal:

1) Page Limitations: The following describes proposal page limitations:
   a) The Technical/Management Proposal shall be limited to **25** pages. Technical/Management proposals and Statements of Work must be provided in Microsoft Word. Signed pages may be submitted in Adobe.
   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, diagrams, cover page, table of contents, and restrictive/proprietary markings (in header or footer). 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 25. 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 **10** pages.

h) **Please Note: The Government will check the proposal and SOW for conformance to the stated requirements. Any pages in excess of the stated page limitation after the format check will not be considered for review purposes.**

2) The Technical/Management proposal(s) shall include a discussion of the nature and scope of the research and the technical approach. Additional information on prior work in this area, descriptions of available equipment, use of base support (if requested), data and facilities and resumes of personnel who will be participating in this effort should also be included as attachments to the technical proposal. These volumes shall include a SOW 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.*** Refer to the BAA Guide for Industry referenced above to assist in SOW preparation. In addition to the contractor proposed SOW, a Government generated supplemental SOW containing additional contracting requirements will be included in any resulting contracts (Attachment 8).

3) Any questions concerning the technical proposal or SOW preparation shall be referred to the Technical POCs listed in the RFP.

c. Cost/Business Proposal:

1) Separate the proposal into a business section and cost section. If adequate price competition does not exist, and the threshold for a negotiated contract is equal to or expected to exceed $2,000,000.00, submission of certified cost or pricing data may be required.

a) See Attachment 2 for the Model Contract. Note that the document awarded may include contract line items (CLINs)/clauses/articles in addition to those in the model, and/or some of the

CLIN/clauses/articles in the model may be deleted, depending on the specific circumstances of the individual award. Any additions or deletions will be negotiated with the offeror prior to award.

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 announcement including the model contract, any information not technically related, etc. Provide rationale for exceptions.

c) Associate Contractor Agreements: Associate Contractor Agreements (ACAs) are agreements between contractors working on Government contracts that require 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.

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

e) Subcontracting Plans: For efforts to exceed $750,000, Subcontracting Plans shall be submitted in the cost/business proposal. Reference FAR 19.704 and DFARS 219.704 for subcontracting plan requirements. Small business concerns are exempt from this requirement. If an IDIQ contract arrangement is anticipated, the basis for the subcontracting plan should reflect the entire ceiling amount.

f) 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.

g) Completed Certifications and Representations (Section K) are due with the proposal. Certifications and Representations (Section K) can be found at Attachment 3. Offerors may also be required to submit updated or supplemental Certifications and Representations based on the specifics of their proposal.

h) If an offeror proposes the use of GFP, 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, computer, etc.) as well as labor and overhead rates should be provided by contractor fiscal year (CFY). 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 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 their applicable rates, must be broken out and the bases used 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's) 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 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 an analysis of the proposed subcontract in accordance with FAR 15.404-3(b). Provide an analysis concerning the reasonableness, realism and completeness of each subcontractor's proposal. If the analysis is based on comparison with prior prices, identify the basis on which the prior 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 or day. State the basis of said rate and give your 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, the destination and purpose. Travel costs should be broken out by trip with number of travelers, airfare, per diem, lodging, etc.

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, GFP, CDRLs), the exceptions should be clearly stated in the cost proposal.

l) **Forward Pricing Rate Agreements:** Offerors who have forward pricing rate agreements (FPRA's) and forward pricing rate recommendations (FPRR's) should submit them with their proposal.

m) Cost/Business proposals have no page/formatting limitations.

3) **Proposal Content Summary**: You may be ineligible for award if all requirements of this solicitation are not met on the proposal due date.

4. White Paper/Proposal Review Information

1) FIRST STEP – White Paper Review Criteria: The Government will review White Papers to determine which of them have the potential to best meet the Air Force's needs based on the following criteria, which are listed in **descending** order of importance:

a) Unique and innovative approach proposed to accomplish the technical objectives. New and creative solutions and/or advances in knowledge, understanding, technology, and the state of the art.

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

c) Soundness of the offeror's technical approach.

d) Affordability (Proposed ROM Cost Estimate).

2) SECOND STEP - Proposal Peer or Scientific Review Criteria: Proposals will be reviewed against the criteria listed below. The technical aspect, which is ranked as the first order of priority, shall be reviewed based on the following criteria that are of **descending** order of importance:

a) **Technical**:

(1) Unique and innovative approach proposed to accomplish the technical objectives. New and creative solutions and/or advances in knowledge, understanding, technology, and the state of the art.

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

(3) Soundness of the offeror's technical approach including whether the proposal identifies major technical risks, clearly defines feasible mitigation efforts, and demonstrates related experience and qualifications of technical personnel.

(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 evaluation 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) SECOND STEP / 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.

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

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.

d) As indicated in Section I.5.f. above, the Government will conduct a S&T Protection Initial Risk Review only for those proposals categorized as Selectable and selected for funding and negotiations.

5. Award Administration Information

1) **Award Notices**: Offerors will be notified whether their proposal (i.e., a proposal in response to letter RFP) is recommended for award by e-mail. The notification is not to be construed to mean the award of a contract or assistance award 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:** Refer back to paragraph I.3.a., CDRLs.

V. BAA WITH CALLS SECTION (This is a One-Step or Two-Step process To Be Determined on each Call)

1. Proposal and Submission Information

a. **Overview**: This BAA will have Calls that consist of either a One-Step or Two-Step process, described in detail below. For a One-Step Call, only

proposals will be solicited. For a Two-Step Call, white papers will be solicited and subsequent RFPs may follow after Peer and Scientific Reviews. The One-Step or Two-Step process will be determined on each individual Call. A unique Statement of Objectives (SOO) will be included with each Call.

For additional information, a copy of the Broad Agency Announcement (BAA) Guide for Industry is located at https://www.afrl.af.mil/Portals/90/Documents/HQ/BAA%20Ind%20Guide%202020.pdf?ver=7AivkWvoUoptKgypgCuIvw%3d%3d.

All white paper and proposal submission information for both One-Step and Two-Step Calls will be specified in each Call solicitation.

For each Call that is announced pursuant to this BAA, there will be a "moratorium" beginning when the Call is published and continuing until six months after the due date for proposals, during which no white papers submitted covering the topic specified in the Call will be reviewed.

2. White Paper Instructions *(First Step if following a Two-Step Process)*:

All white paper instructions including General Instructions, page limitations, format, technical portion, cost portion, content summary, and any other information will be specified in each Call.

3. Proposal Submission Information Instructions *(First Step if following a One-Step process or Second Step if following a Two-Step process. The One-Step or Two-Step Call Process will be determined on each individual Call):*

All proposal instructions including General Instructions, page limitations, format, technical/management portion, cost/business portion, cost element breakdown, proposal content summary, funding restrictions, and any other information will be specified in each Call.

4. White Paper/Proposal Review Information

a. **White Paper Peer or Scientific Review Criteria** (First Step if following a Two-Step Process): The Government will review White Papers to determine which of them have the potential to best meet the Air Force's needs based on the following criteria that are of descending order of importance:

1) Unique and innovative approach proposed to accomplish the technical objectives. New and creative solutions and/or advances in knowledge, understanding, technology, and the state of the art.

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

3) Soundness of the offeror's technical approach.

4) Affordability (Proposed ROM Cost Estimate).

b. **Proposal Peer or Scientific Review Criteria** (First Step if following a One-Step Call process or Second-Step if following a Two-Step Call process. The One-Step or Two-Step Call Process will be determined on each individual Call): Proposals will be reviewed through a Peer or Scientific Review process. ***Individual Calls may utilize the standard Proposal Peer or Scientific Review Criteria or may tailor the Proposal Peer or Scientific Review Criteria***.

The following are the standard Proposal Peer or Scientific Review Criteria. The technical aspect, which is ranked as the first order of priority, shall be reviewed based on the following criteria that are of descending order of importance:

(1) **Technical**:

(a) Unique and innovative approach proposed to accomplish the technical objectives. New and creative solutions and/or advances in knowledge, understanding, technology, and the state of the art.

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

(c) Soundness of the offeror's technical approach including whether the proposal identifies major technical risks, clearly defines feasible mitigation efforts, and demonstrates related experience and qualifications of technical personnel.

(d) 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.

(2) **Cost/Price**: The cost evaluation 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).

c. **PROPOSAL - Review and Selection Process**

1) **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 evaluation, as well as importance to agency programs and funding availability.

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

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

Note: The Government reserves the right to award some, all, or none of the 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.

2) No other evaluation criteria will be used.

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

4) As indicated in Section I.5.f. above, the Government will conduct a S&T Protection Initial Risk Review only for those proposals categorized as Selectable and selected for funding and negotiations.

5. Award Administration Information

1) **Award Notices**: Offerors will be notified whether their proposal (i.e., in response to a Call) is recommended for award by e-mail. The notification is not to be construed to mean the award of a contract is assured, as availability of funds and if necessary, successful negotiations are prerequisites to any award.

2) **Administrative and National Policy Requirements**: See Section I. above.

3) **Reporting:** Refer back to paragraph I.3.a., CDRLs.

VI. Other Information (Applicable to both Open Two-Step BAA and Calls)

1. **Acquisition of Commercial Items**: Based upon market research, the Government is not using the policies contained in FAR 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 evaluate proposals for selection. 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. **Feedback Sessions:**

   a. **Contracts:** When requested, a Feedback Session will be provided with content consistent with the procedures that govern BAAs (FAR 35.016). The process will follow the time guidelines outlined in the award notice described in Paragraph IV.5.1 (for the Open BAA) and V.5.1 (for Calls).

   b. **Assistance Instruments:** When requested, an informal feedback session will be provided. The process will follow the time guidelines outlined in the award notice described in Paragraph IV.5.1 (for the Open BAA) and V.5.1 (for Calls).

4. **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: https://www.acq.osd.mil/asda/dpc/ce/index.html.

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 https://www.dol.gov/agencies/ofccp/pre-award. 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. **Updates of Publicly Available Information Regarding Responsibility Matters:** Any contract or assistance award that exceeds $600,000; 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."

7. **Proposal Adequacy Checklist:** Offerors of proposals requested based on White Papers (Step Two of Open BAA) may be required to submit the completed provision at DFARS 252.215-7009 Proposal Adequacy Checklist (Attachment 5) with their proposal.

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

   a. White Papers submitted under the Open BAA are due to the PACER central inbox, AFRL.RQ.PACERBAA@us.af.mil

b. Under the Open BAA, White Papers are due no later than the due date and time specified in this announcement. White Papers/Proposals in response to a Call are due no later than the due date and time specified in the Call.
c. White Paper and Proposal page limits are strictly enforced.
d. White Papers and Proposals must be submitted in the format specified.
e. Proposals are due to the Contracting POC identified in the Request for Proposal or Call.
f. The Cost/Business Proposal must contain all information described in the Cost/Business Proposal Submission Section.
g. Offerors other than small businesses must include a subcontracting plan.
h. Offerors who have Forward Pricing Rate Agreements (FPRA's) or Forward Pricing Rate Recommendations (FPRR's) should submit them with their proposal.
i. If a DD254 is applicable, offerors must verify their Cognizant Security Office information is current with Defense Counterintelligence and Security Agency (DCSA) at www.dcsa.mil.
j. If effort is subject to export control, offerors must submit a Certified DD Form 2345, Militarily Critical Technical Data Agreement, with proposal.

ATTACHMENTS

List of Attachments*:

1. Supplemental Instructions for Assistance Instrument Proposals
2. Model Contract
3. Section K – Representations and Certifications
4. Section L – Instructions, Conditions, and Notices to Offerors
5. DFARS 252.215-7009 Proposal Adequacy Checklist
6. Contract Data Requirements List (CDRL)
7. DD Form 254
8. Statement of Work (SOW) Supplemental Requirements
9. Standard Form (SF) 424, Research and Related Senior/Key Person Profile (Expanded) Form
10. Security Program Questionnaire

*Please note: The attachments are for planning and estimating purposes only. Attachments will be tailored to each specific award.