Broad Agency Announcement

Air Combat Evolution (ACE) Technical Area 4 Phases 2 and 3

STRATEGIC TECHNOLOGY OFFICE

HR001122S0015

February 1, 2022

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PART I: OVERVIEW INFORMATION

- **Federal Agency Name** – Defense Advanced Research Projects Agency (DARPA), Strategic Technology Office (STO)
- **Funding Opportunity Title** – Air Combat Evolution (ACE) Technical Area 4 Phases 2 and 3
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- Anticipated individual awards – A single award is anticipated.
- Types of instruments that may be awarded – Procurement Contract or Other Transaction.
- Any cost sharing requirements – None
- Agency contact

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PART II: FULL TEXT OF ANNOUNCEMENT

I.   Funding Opportunity Description

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

The Defense Advanced Research Projects Agency (DARPA) is soliciting innovative proposals for the Air Combat Evolution (ACE) program to convert existing F-16 aircraft into human-on-the-loop, safety-sandboxed testbed aircraft to support autonomy development and experimentation.

A.   Program Overview

1. ACE Program Background

DARPA is developing a new warfighting concept called Mosaic Warfare, which is an approach to combined arms maneuver, wherein capabilities traditionally provided to close a monolithic kill chain dependent upon a single, eminently capable platform are instead provided by a heterogeneous set of manned and unmanned systems. When properly orchestrated, these dynamically composed webs of heterogeneous kill chains deliver a range of necessary effects.

In the Mosaic Warfare vision, humans are expected to fight in close collaboration with autonomous weapon systems in complex environments (such as those described by coupled, nonlinear, heterogeneous, and adaptable agents) with tactics informed by artificial intelligence (AI). Future warfare involving manned platforms directing a larger number of proliferated unmanned systems in all operating domains cannot be realized without operator trust in combat autonomy. Today's warfighters operate within Service cultures that tend to distrust complex autonomy and utilize autonomous systems sub-optimally in limited, supporting roles (e.g. logistics or intelligence, surveillance, and reconnaissance only).

The ACE program will increase trust in combat autonomy using human-machine collaborative dogfighting as its challenge problem, which also serves as a representation of an entry point into complex human-machine collaboration. ACE will apply existing AI technologies to the dogfight problem in experiments of increasing realism. In parallel, ACE will implement methods to measure, calibrate, increase and predict human trust in combat autonomy performance. Finally, the program will scale the tactical application of automating a dogfight to more complex, heterogeneous, multi-aircraft, operational level simulated scenarios informed by live data, laying the groundwork for future live, campaign-level Mosaic Warfare experimentation.

The ACE program effort comprises four technical areas (TAs). This solicitation is for TA4. It is expected that coordination with the TA1 and TA2 performers as well as the Experimentation

Integration Team (EIT) will be required to achieve performance objectives. A description of each relevant technical area and the EIT follows the figure.

Figure 1 shows the relationship between the different ACE program Technical Areas. The ACE program is constructed to address four primary technical challenges:

1. Technical Area 1: Build combat autonomy for local (individual and team tactical) behaviors
2. Technical Area 2: Build and calibrate trust in air combat local behaviors
3. Technical Area 3: Scale performance/trust to global (heterogeneous multi-aircraft) behavior
4. Technical Area 4: Build full-scale air combat experimentation infrastructure
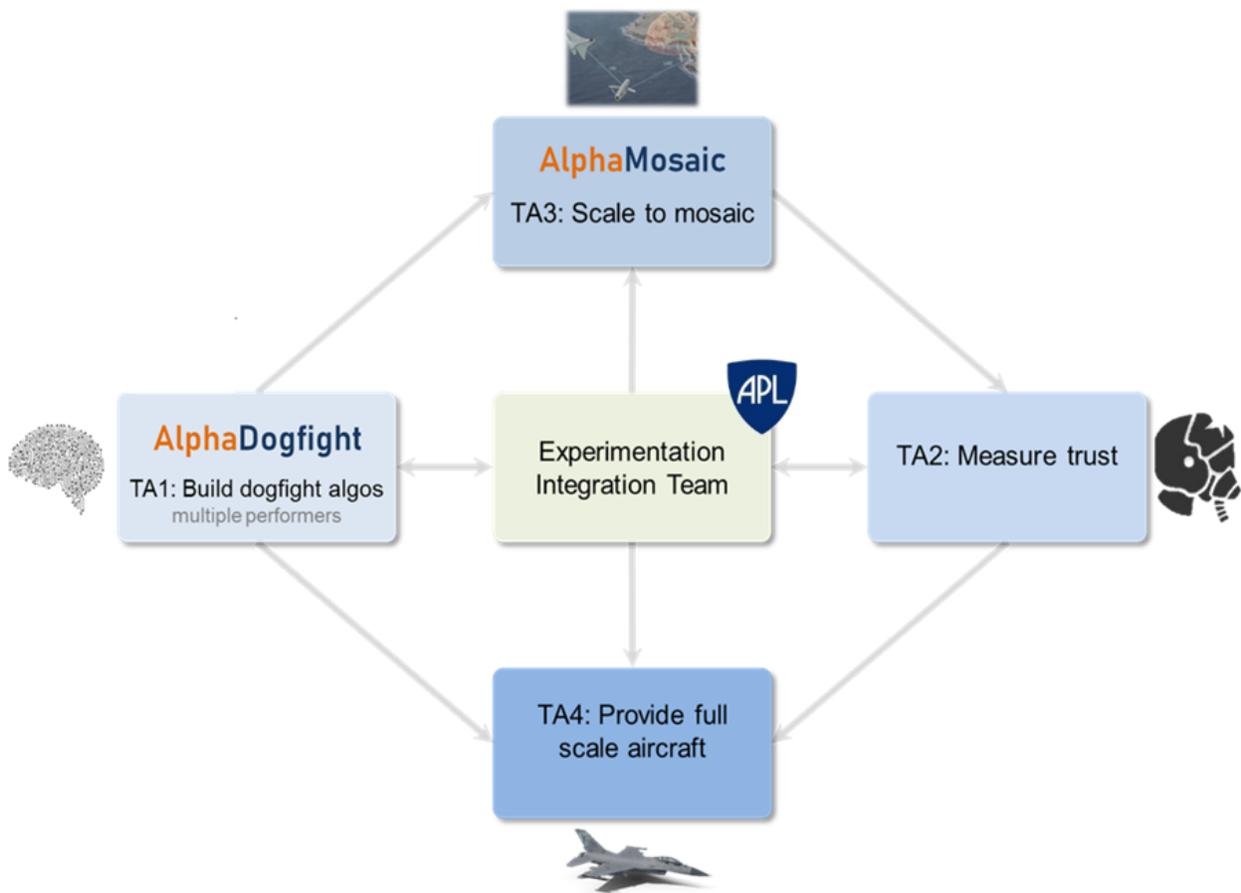
Figure 1. Relationship between the ACE Technical Areas and EIT.

The TA1 performers develop and demonstrate AI algorithms capable of human-level performance in air combat within visual range (WVR) individual and team tactical maneuvering. Implementation in Phase 1 used government-furnished infrastructure for modeling and simulation (M&S). TA1 performers will graduate to progressively more realistic implementations including live risk-reduction aircraft in Phase 2, and ultimately full-scale combat representative aircraft modified by TA4 in Phase 3.

The TA2 performer models and defines well-calibrated trust, mistrust, and distrust in the autonomous system performance. Human pilots must appropriately trust the performance of the resulting systems to drive acceptance of their use on military aircraft. The TA2 performer is responsible for modeling pilot trust within the context of the ACE program parameters, including the experimental design construct and trust data analytics. They are also responsible for aspects of human-machine interaction methods and human-machine interface (HMI) design and development, working closely with TA1 performers, the TA4 performer, Subject Matter Experts (SMEs), and the Experimentation Integration Team (EIT) to operationalize HMIs that support well-calibrated pilot trust in TA1 AI agents.

To enable the modeling and trust calibration, ACE uses a dual operational task (DOT) paradigm. In this DOT paradigm, the operator is responsible for dividing attention and workload between two, equally important but mutually exclusive tasks: the dogfight and a simulated mission commander task. The TA4 performer will not be responsible for developing the DOT; however, TA4 performers should ensure appropriate displays and interfaces are available to support the DOT onboard the aircraft.

The TA3 performer is focused on scaling algorithmic approaches to battle management scenarios. No dependencies from TA3 are expected to impact TA4. Close interaction between the TA3 and TA4 performer is not anticipated.

A Government-led independent Experimentation Integration Team (EIT), facilitated by Johns Hopkins University Applied Physics Lab, coordinates the interdependent research activities associated with the different Technical Areas. Due to the complicated integration requirements across multiple performers relying on a common experimentation infrastructure, the EIT will be responsible for the development and maintenance of the necessary Interface Control Documents (ICD) and Application Programming Interfaces (API) associated with M&S, risk reduction aircraft, and full-scale aircraft assessments. Extensive interaction between the TA4 performer and the EIT is expected.

2. Solicitation Details

After a successful Phase 1, the ACE program has entered Phase 2. As such, this solicitation is for TA4 Phase 2 (Base Period) and TA4 Phase 3 (Option 1). The solicitation also includes an additional aircraft hardware option (Option 2), and an additional aircraft mission systems software integration option (Option 3). The purpose of the Phase 2 and Phase 3 efforts are to support autonomous WVR maneuvering and trust research in the ACE program, while the additional aircraft options are designed to support ACE as well as a wider range of autonomy development needs.

Technical Areas 1, 2 and 3 (TA1, TA2, TA3), as well as Phase 1 of Technical Area 4 (TA4), were solicited under prior BAAs (HR001119S0051 and HR001120S0028). Information regarding TA1, TA2, TA3, and TA4 Phase 1 is provided in this BAA for informational and contextual purposes only.

Compliant proposals must address the Phase 2 Base Period, the Phase 3 Option (Option 1), and the additional aircraft hardware option (Option 2). Proposers may choose to submit all, some, or none of the mission systems software integration specified in the additional aircraft mission systems software integration option (Option 3).

3. Program Objectives

The primary objective of TA4 is to develop full-scale aircraft experimentation platforms capable of implementing the ACE algorithms and technologies, including human machine interfaces (HMIs), generated by the ACE TA1 and TA2 performers. The TA4 performer will be responsible for full-scale aircraft modification, providing airworthiness documentation, and testing that includes aircraft interface development, ground test, flight test and experimentation, as well as any specialized maintenance. For the Phase 2 Base Period and the Phase 3 Option (Option 1), the performer will modify two F-16D aircraft making them capable of integrating WVR autonomy algorithms developed in TA1 and TA2 through an interface specified in a Government-controlled ICD. The performer will also modify aircraft to provide appropriate interfaces for the integration of HMIs developed in TA1 and TA2, safety pilot overrides, and a paddle off/on disconnect capability. The performer will facilitate safety and airworthiness reviews to enable supervised, live WVR engagements.

A secondary objective of TA4 is to establish human-on-the-loop experimentation infrastructure needed to accelerate development of autonomous systems. The hardware and software solutions proposed under the additional aircraft hardware option (Option 2) and the additional aircraft mission systems software integration option (Option 3) are expected to establish the desired human-on-the-loop experimentation infrastructure. In human-on-the-loop experimentation, a pilot sits in the seat of the aircraft with access to all the onboard controls and safety overrides, while the autonomy is given aircraft and mission systems control to test new functionality. A pilot is then able to test an autonomy solution in a real-world setting while being able to disengage the autonomy at any time by "paddling" it off and taking over control of the aircraft and mission systems. This allows the pilot to both provide feedback to developers and to act as a safety net or runtime assurance for the autonomy. It is also desirable for the pilot to be able to "paddle" the autonomy back on to seamlessly re-engage after the pilot makes an adjustment or correction. Modifications to government furnished F-16C aircraft in quantities of 2, 4, 6, 8, or 10 aircraft are requested for the additional aircraft hardware option (Option 2), while the additional aircraft mission systems software integration option (Option 3) is expected to apply equally across all modified aircraft with connectivity to the specified mission system. The first two additional aircraft are desired for ACE 2v2 testing.

Technical objectives including details about system requirements are documented in Section I.C, *Technical Objectives for Phase 2, Phase 3 and the Additional Aircraft Options*. These technical objectives apply for all proposed options unless otherwise indicated.

B. Program Structure and Technical Approach

1. Phase 2 (Base Period - 15 Months)

During the Phase 2 base period the performer will provide the design of a technical solution, perform fabrication, installation, and testing of kits to convert two government furnished F-16D aircraft into human-on-the-loop, safety-sandboxed testbed aircraft which meet the desired attributes of the technical approach outlined in Section I.C, *Technical Objectives for Phase 2, Phase 3 and the Additional Aircraft Options*.

At a high level, these solutions will include a mission computer that receives state data from the aircraft and which has a safety-sandboxed interface to the flight controls, including a newly-installed autothrottle; an IP datalink that enables control-room access to the mission computer during tests for development purposes; interfaces to a live, virtual, and constructive (LVC) capable datalink; and connections to appropriate displays (either carry-on tablets or repurposing of existing displays), helmet-mounted displays, and control interfaces for the pilot (either through a tablet, hands-on-stick-and-throttle (HOTAS), or other solution) to enable operation of the system, and performance of the DOT. Because the required aircraft modifications constitute a control system, end-to-end latency and jitter of the proposed solutions should be minimized. Figure 2 shows a notional system architecture for the first two aircraft to be modified during Phase 2 and used during Phase 3.
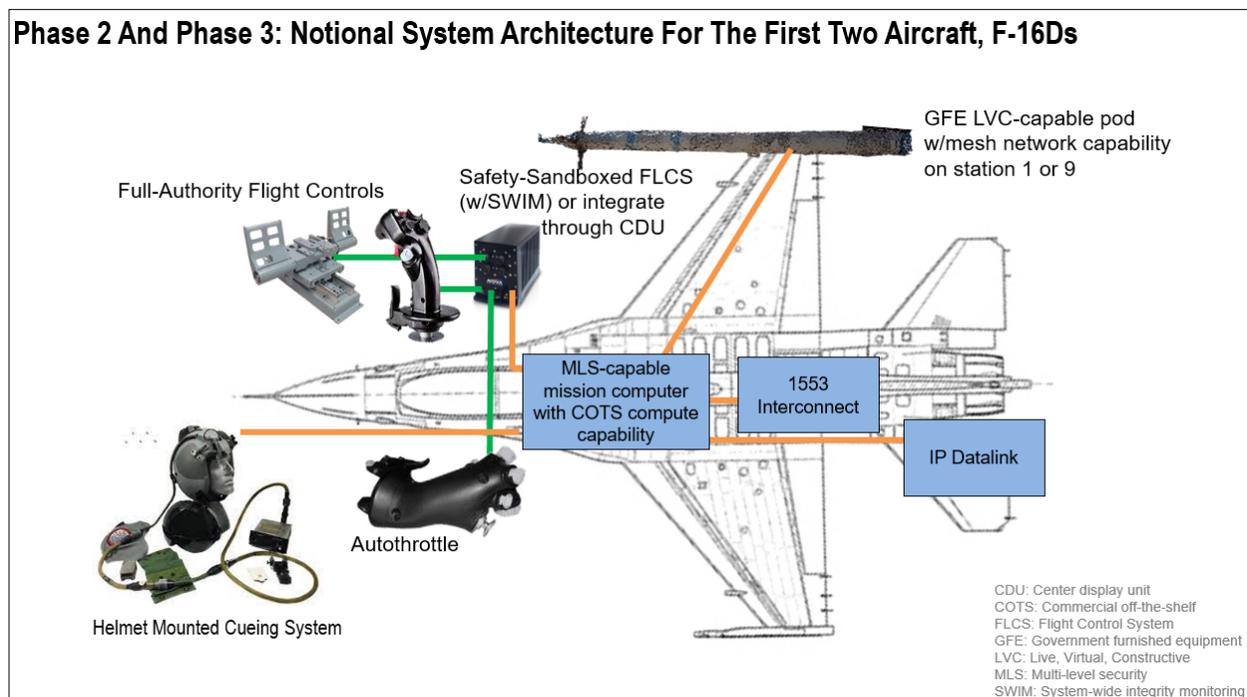
Figure 2. Notional system architecture diagram for the Phase 2 Base and Phase 3 Option period.

The TA4 performer will work with the existing ACE performers and the EIT to develop software interfaces that provide state information to the mission computer and command information to control the aircraft. The performer will also work with existing ACE performers and the EIT to effectively integrate their HMI into the technical solution. It is expected that a multi-function display (MFD) or tablet interface will be required to display and interact with the dual operational task, and that a helmet-mounted display (HMD) will also be utilized as part of the

technical solution. Technical solutions should include a software development kit for third party providers and provide the Government the ability to independently expand message sets.

The performer will provide ground and flight test support for their technical solution and conversion kits. Phase 2 will culminate in a flight test of the modified aircraft which demonstrates the safety features of the technical solution and paddle-on/paddle-off functionality of the autonomy.

The performer will provide an M&S environment, a software-in-the-loop (SIL) simulator, and/or a hardware-in-the-loop (HIL) simulator of their technical solution during Phase 2. The M&S environment will need to enable much faster than real-time execution and should be designed to be compatible with the existing ACE simulation framework. To integrate with the existing framework, the performer is desired to provide relevant documentation, model descriptions, data tables and/or software of a reasonable representation of the aero model, the propulsion model, the flight control system (including any safety trips), and the weights and balances of the aircraft as a function of fuel states and stores (mass, moments-of-inertia, CG locations, etc) of the F-16 C/D. It is expected that the M&S environment will require changes as testing proceeds throughout Phases 2 and 3. The M&S environment, SIL, and HIL should replicate interfaces, latency, jitter, safety trips, and other characteristics of real-world operation as closely as possible to those on the aircraft. Ideally, these will be parameterized and exposed in such a way to enable simple model tuning. The SIL and/or HIL should run in real-time. The SIL and/or HIL should be provided with an API, be able to run on a Linux operating system, be able to be containerized (for the SIL), and be accessible through standard interfaces. Source code and/or configuration files should be accessible to the government and EIT so that any parameters on which the system depends (such as the aero model, flight control system, safety logic) can be accessed and varied. The SIL and/or HIL will be developed in coordination with the EIT.

Latency and jitter will be characterized for each software and hardware interface. These interfaces are often referred to as "adapters"—for example the "platform adapter" is the interface between the mission computer and the connection to the aircraft bus data where aircraft state information is passed in to the mission computer as observations and flight control inputs are passed back. The adapters will be developed by the TA4 performer in coordination with the EIT.

The Phase 2 base period will consist of non-recurring engineering (NRE) design, kit fabrication, and kit installation. Required reviews/meetings are a kickoff, a Preliminary Design Review (PDR), a Critical Design Review (CDR), and Test Readiness Reviews (TRR) prior to ground or flight test events. Major review descriptions and expectations are included in Section I.F.

The performer is expected to perform the kit installation. However, it is possible that the kit installation could impact or dovetail with other scheduled maintenance or modifications, which could require increased schedule flexibility.

Because of the timeframe and scope of the effort in this solicitation, the proposed technical solution is anticipated to rely heavily on prior work. The proposer should clearly identify what parts of their proposed technical solution are prior work versus new work, as well as the heritage of the prior work, especially prior DARPA work. The technical solution should leverage existing

high Technical Readiness Level (TRL) solutions and ideally solutions that have a USAF airworthiness certification from prior work.

The proposed technical approach should identify aircraft modifications required by the technical solution, ideally seeking to minimize those modifications and that the modifications be easily reversible when practicable.

The desired timeframe is to have at least one aircraft ready to perform flight test within 15 months of contract award and the second aircraft ready not later than 17 months from contract award.

The performer will be responsible for airworthiness and any security certifications required for the system. The performer will support the ground tests and flight tests required to return the aircraft to flying status after installation of the technical solution. The performer will support data reduction, analysis, and software modification based on ground test and flight test results.

The proposer should include appropriate on-site subject matter expertise during ground and flight checkout of the aircraft modifications. This is expected to occur across approximately a one-month flight window in FY23. The site can be assumed to be Edwards AFB, California or Davis-Monthan AFB, Arizona. Proposers should price the more expensive location.

2. Phase 3 (Option 1 – 15 Months)

The Phase 3 Option period will consist of flight test support of the converted aircraft. At the beginning of Phase 3 the performer will support flight checkout of the two modified F-16D aircraft.

The TA4 performer will be required to support test and safety planning for the 1v1, 2v1, and 2v2 testing windows and competitions. Experiments will be conducted in a live environment using a deliberate build-up approach starting with 1v1, 2v1, and then 2v2 testing events. The use of LVC capabilities will likely be leveraged to enable safe build-up. The performer will need to have appropriate on-site subject matter expertise during live-fly events during Phase 3. This is expected to occur across six, approximately one-month flight windows in FY24. The site can be assumed to be Edwards AFB, California or Davis-Monthan AFB, Arizona. Proposers should price the more expensive location.

For the 2v1 and 2v2 test events, additional manned F-16s may be used as adversary aircraft. These aircraft will be equipped with the same GFE datalinks as the 2 modified F-16D aircraft. If the additional aircraft options are executed and the first two aircraft are ready, it is highly desirable to use those two aircraft in this role.

Proposers should include unspecified software changes in their bid for Phase 3. It is expected that lessons learned during transition from Phase 2 to Phase 3 will necessitate software changes as well as lessons learned throughout the various flight tests during Phase 3. The TA4 performer should be ready to rapidly modify software to support the program as required during Phase 3.

3. Additional Aircraft Hardware Option (Option 2 – Notionally 21 months)

The additional aircraft options will convert USAF F-16C aircraft (GFE) that have been equipped with the APG-83 radar into human-on-the-loop, safety-sandboxed testbed aircraft to support autonomy development and experimentation. The additional aircraft hardware option will consist of NRE design, kit fabrication, and kit installation. Required reviews/meetings are a kickoff, a Preliminary Design Review (PDR), a Critical Design Review (CDR), and Test Readiness Reviews (TRR) prior to ground or flight test events. Major review descriptions and expectations are included in Section I.F.

At a high-level, this option will replicate the modifications that were made to the first two F-16D aircraft but on F-16C aircraft, and will add additional hardware connectivity by integrating the mission computer with additional mission systems at the physical layer. This option is only for the physical layer and will not require the performer to modify software to create interfaces at the logical layer. The performer will design and perform physical integration (power and appropriate cabling for data) for the following mission systems in a manner that enables software modifications for paddle-on/paddle-off autonomous control over these systems for human-on-the-loop autonomy experimentation. While software modification is not a part of this option, a high level description of how paddle-on/paddle-off autonomous control could be achieved given the wiring solution is required:

- Northrop Grumman APG-83 Active Electronically Scanned Array (AESA) fire control radar
- Lockheed Martin Legion Pod
- ALQ-213
- Angry Kitten Pod
- Link-16
- Targeting pods such as the Lockheed Martin Sniper pod or the Northrup Grumman LITENING pod

Figure 3 shows a notional system architecture for the additional aircraft option.
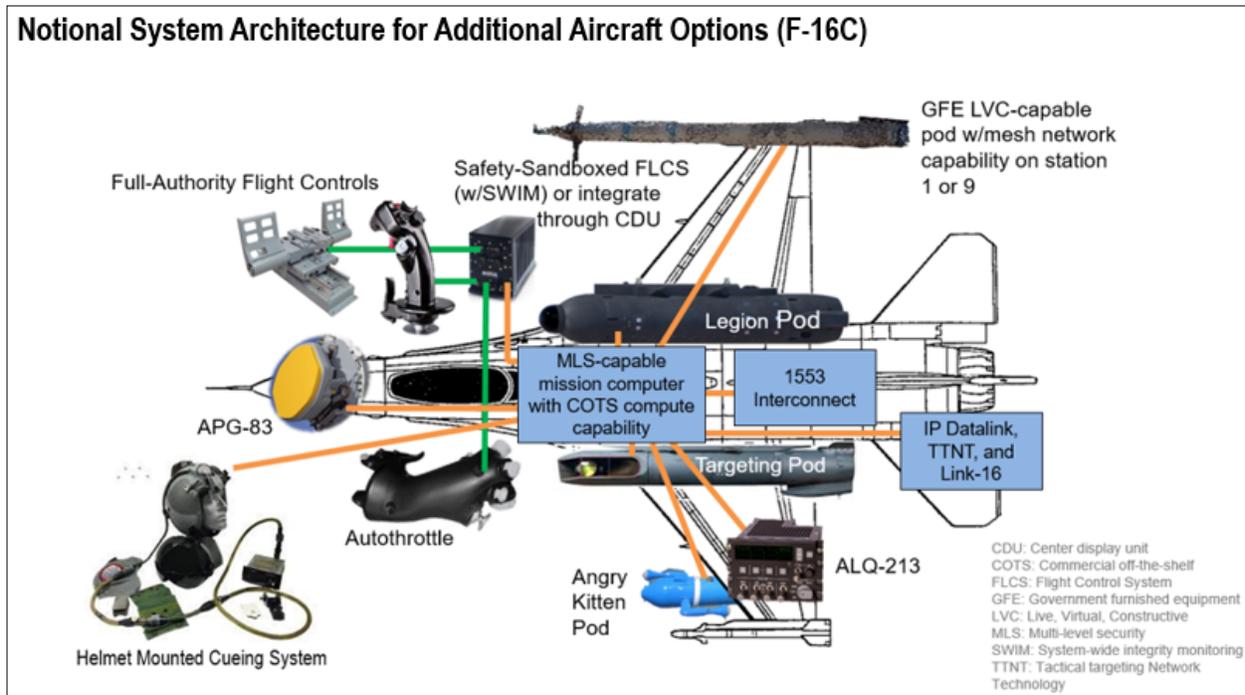
Figure 3. Notional system architecture diagram for the additional aircraft options.

Desired attributes of the technical approach are outlined in Section I.C, *Technical Objectives for Phase 2, Phase 3 and the Additional Aircraft Options*. The performer will provide hardware kits and installation for F-16C aircraft. This option includes hardware interconnects to desired mission systems listed in Table 1. Kit costs and installation will be provided for quantities of 2, 4, 6, 8, and 10 additional aircraft. The performer will be responsible for airworthiness and any security certifications required for the system.

The performer will support the ground and flight tests required to return the aircraft to flying status after installation of the technical solution. Ideally, the aircraft will return to flight with software modifications made under the additional aircraft mission systems software integration option (Option 3) complete so that both hardware and software modifications can be tested. The performer will support data reduction, analysis, and software modification based on ground test and flight test results.

Due to the variability in the anticipated solutions for the additional aircraft hardware option (Option 2), proposers should indicate the desired length of the option and when it should be executed in order to achieve program objectives. It is notionally assumed that the start date for work on the additional aircraft hardware option, if executed, will be approximately 9 months after Phase 2 contract award and will last 21 months.

4. Additional Aircraft Mission Systems Software Integration Option (Option 3)

The additional aircraft mission systems software integration option covers software integration of mission systems with the mission computer. Specifically, the ability to read data from and send commands to the following mission systems (assumes hardware connections are in place from Option 2):

- Northrop Grumman APG-83 Active Electronically Scanned Array (AESA) fire control radar
- Lockheed Martin Legion Pod
- ALQ-213
- Angry Kitten Pod
- Link-16
- Targeting pods such as the Lockheed Martin Sniper pod or the Northrup Grumman LITENING pod

Proposers may choose to propose solutions to all, some, or none of the mission systems listed.

Please be aware that these mission systems may be protected in part or in whole at a classified level in corresponding Security Classification Guides (SCGs). For example, the F-16 MULTI-MISSION FIGHTER SECURITY CLASSIFICATION GUIDE governs F-16s and provides classification guidance for parts and systems associated with the F-16. To request the F-16 SCG and other associated SCGs please fill out the Security Classification Guide Request Form in Appendix 4. Note: Some SCGs are COLLATERAL and will require a Facility Clearance (FCL) to receive the classified SCGs. UNCLASSIFIED SCGs will be emailed to the UNCLASSIFIED email provided in the SCG request form.

Each mission system integration will allow the mission computer to send the full set of control inputs to and receive the full set of data feeds from the specified mission system. It is desired to enable at least the same level of functionality a pilot has for control of each mission system.

Proposers should identify the input and output methodologies (1553, Ethernet, etc.), anticipated data sets, frame rate, real-time, operating system, tools, etc. for their proposed integration with each mission system as well as any functions that would not be automated or require interaction with the mission computer, aircraft and/or the pilot (e.g. initialization, calibration, etc.). Proposers are encouraged to focus their responses on their interface(s) with the mission systems rather than the performance of the mission systems.

Proposers should describe the system safety elements of each mission system integration such as disconnects, performance limitations, etc. Safety overrides need to be designed to enable the pilot to disengage all autonomous functions for the mission systems as a whole. It is recommended that this use a similar HOTAS action as in Section I.C. Technical Objective 7: Paddle Off and On Capability. This would provide a single HOTAS action that disengages all autonomy functionality.

Ideal solutions will enable seamless paddle off/on capabilities for all of the mission systems. This means that a pilot can seamlessly toggle-on and toggle-off the autonomy for all mission systems at once, with control for the toggled-off systems reverting to traditional pilot control.

Additionally, the technical solution will have the ability to individually toggle on or off autonomy functionality for each of the controlled mission systems. For example, if the pilot likes the way the autonomy is managing radar and flying the aircraft but does not like the way the

autonomy is handling the targeting, the pilot should be able to independently disengage the autonomy's control of targeting without impacting the autonomy's control of the radar and flight controls. Likewise, the pilot should be able to independently disengage the flight controls without affecting the autonomy's control of the radar and targeting.

Proposers should strive to provide solutions that enable the displays in the cockpit to continue to be populated as expected by the pilot while the mission computer is controlling the mission system in the autonomous mode. This enables the pilot to have situational awareness of what the autonomy is doing by monitoring the same displays the pilot has experience with. This does not preclude development of additional enhanced displays that can be displayed on the tablet interfaces.

Proposers should ensure that all mission systems data can be recorded by the mission computer at all times, whether the pilot is flying or the autonomy is engaged.

Proposers should identify all aircraft modifications required for each mission system integration, ideally seeking to minimize those modifications. It is desired that the modifications enable A/B style operations so each mission system could be operated in an autonomy-enabled mode, or an "unmodified, operationally representative" mode if required for other testing purposes.

The approach to integrating the software, safety sandbox, and toggle-on/off functionality may dictate particular hardware interconnect requirements and/or modification of an OFP. Details regarding these considerations and their impacts should be provided in the proposal.

Due to the variability in the anticipated solutions for the additional aircraft mission systems software integration option (Option 3), proposers should indicate the desired length of the option and when it should be executed in order to achieve program objectives.

C.   Technical Objectives for Phase 2, Phase 3, and the Additional Aircraft Options

This section discusses the technical objectives. The proposer's technical solution and statement of work (SOW) should address as many of these objectives as possible. The proposer should include a table in their proposal that specifies the extent to which the technical solution will meet each objective (completely, partially, or not at all). These objectives apply to all options unless otherwise specified.

1.   Technical Objective 1: Overall technical solution elements and attributes

The proposer will identify a reasonable location to house all required components and include an analysis of size, weight, and power (SWAP) considerations. Podded solutions are less desirable than internal solutions. Solutions which utilize the ammo drum are less desirable than podded solutions.

The proposed technical solution will consist of the following elements at a minimum:

1. Control of the flight controls from the mission computer. The proposed technical solution's interface to the flight controls will include control of roll, pitch, yaw, throttle (autothrottle modification), and speedbrake. Additionally, the performer should identify and implement other kinds of control modes that would be useful for autonomous operations. As an example, the following types of flight control modes beyond the already present F-16 flight control laws, are desired (not to preclude other control modes):

    a. Flight states (for example heading, speed, and altitude (HSA))
    b. Trajectory following (climb/dive profiles, route following, ground and collision avoidance trajectories, etc.)
    c. Pitch: Gamma, Pitch rate (Nz assumed)
    d. Roll: Roll Rate, Roll Angle
    e. Throttle: Power Lever Angle Command, Speed Command

2. Software capable of enabling third party autonomy applications on the mission computer to control the aircraft flight controls and mission systems as specified in the remaining technical objectives.
3. Hardware connections from the mission computer to aircraft mission systems. Read/write hardware access is desired for all mission systems listed in Technical Objective 5 unless otherwise specified.
4. Software on the mission computer will be designed in a modular fashion. Source code for all software developed to run on the mission computer is desired. This will include adapters for each external-facing component (aircraft flight controls, 1553 interconnect, etc.). The performer will identify an open mission systems (OMS) compliant interface specification. Delivery of a non-proprietary solution including a non-proprietary critical abstraction layer (CAL) is desired.
5. A safety sandbox as described in Technical Objective 3.
6. Data from aircraft state, mission computer, applications and aircraft systems to be provided to the autonomy application, recorded onboard, transmitted to a ground control station and available for live, virtual and constructive (LVC) operations. This data is anticipated to be contributed to a repository. The proposed technical solution will include data-gathering capabilities for the repository, that is the recording, labeling and offboarding of flight, aircraft, mission computer and application data. The proposed data gathering process should be documented in the proposal.
7. Interface with center pedestal display unit (CDU) (may or may not be installed).
8. Helmet with helmet mounted display (HMD), such as the Thales Scorpion Helmet.
9. Two tablet displays per cockpit that would be aircrew carry-on equipment (via Ethernet ports with RJ45-to-USB converters for ejection seat considerations, two required per cockpit).
10. Interface to a GFE time and space position information (TSPI) pod, such as Cubic Secure LVC Advanced Training Environment (SLATE) or Collins Aerospace Common Range Integrated Instrumentation System (CRIIS).

2. Technical Objective 2: The technical solution should be hosted in a mission computer allowing inflight software changes without impacting airworthiness.

An objective for the technical solution is that all software should be able to run on a mission computer and tablets with no impact on the airworthiness of the aircraft. The system should be architected such that any modification can be made to the software running on the mission computer or tablets without requiring an airworthiness review. Software running on the mission computer should be able to be changed during flight without compromising the safety of the system. If there is a component of the modification that is safety-critical, it should be isolated in processing either internal or external to the mission computer and architected to ensure no upstream airworthiness impacts on the mission computer.

The following are additional objectives for the mission computer:

1. Be open architecture and standards-based. Adhere to a VPX standard or other standard which enables swappable upgrades to the compute cards.
2. Include read access for the aircraft's 1553 buses. Write access is desired but not required. If write access is included, it would need to be terminated anytime the system is disengaged (disengagement transitions this to read-only access).
3. Include sufficient input/output (I/O) for the flight controls and the aircraft systems listed in Technical Objective 5.
4. Have a proven multi-level security (MLS) certification strategy for the proposed solution.
5. Be capable of hosting real-time and non-real-time operations.
6. Be capable of running x86-based operating systems.
7. Be capable of interfacing with two onboard tablets.
8. Have easy physical access to allow for plane-side loading of software and data downloads post-mission.
9. The mission computer must be able to be powered on for ground operations to include preflight checks that involve hooking up an external computer to the onboard mission computer. One example would be ensuring Ethernet ports are easily accessible that will allow for external computers to connect to the mission computer or connected network switch using secure shell (SSH).
10. Have a minimum of four unused Ethernet ports for future expansion (may be part of a network switch external to, but connected to the mission computer). All Ethernet and switches should be capable of at least 10 Gb/s.
11. Must include dedicated processing for autonomy algorithms using at least two single board computers (SBC) with each SBC having a minimum performance comparable to or better than a 9th Generation Intel Xeon E-2276ME SBC. Single-threaded performance is the main consideration. Additionally, 32GB or more of RAM and at least 256GB of storage are desired for the SBC.
12. Network-attached storage (NAS) is also required with at least 4TB of storage onboard.
13. Have unused expansion slots (four desired, if feasible within SWAP constraints). The number of available unused VPX slots should be specified. It is desirable to have expansion capability without having to add an additional chassis in a future upgrade.

Proposers should characterize any spare hardware and software resources that might be available to/in the mission computer in their proposed technical solution. As a note, upgrading the processors in the CDU may also be considered as an option if shown to meet program needs.

3. Technical Objective 3: Safety Sandbox

The converted F-16 aircraft technical solution must have a safety sandbox/runtime assurance capability. In this context, a safety sandbox is a component of the technical solution in which system behaviors are bound to remain inside pre-defined safety limits allowing rapid but safe experimentations. When the autonomous system behaviors reach the established safety limits, they are to be automatically limited or may be disengaged with control being passed back to the pilot.

The autonomous system's behavior should be capable of being constantly monitored by both the runtime assurance monitor (the safety sandbox) and the pilot. When performance is undesired or development objectives require it, the pilot may manually suspend and/or terminate the autonomy controlling the aircraft and systems; returning the aircraft to a baseline configuration under the pilot's control.

The safety sandbox should also have physical components in the cockpit that the pilot interacts with. In particular, safety overrides need to be designed to enable the pilot to disengage all autonomous functions (both flight control and mission systems) with a single switch (paddle may be a good option).

Additionally, the ability to individually toggle on or off autonomy components is desired. An example would be if the pilot likes the way the autonomy is managing radar and targeting but does not like the flight path the autonomy is directing, the pilot should be able to independently disengage the ability for the autonomy to control the flight path without impacting the autonomy's control of the radar. Likewise, if the pilot likes the way the autonomy is flying the aircraft but wants to override the usage of the radar, it should be possible to independently disengage the autonomous radar control and take over radar management functions in a simple manner.

The ability to take over all safety-critical functions will be possible with HOTAS.

The safety sandbox will have a defined envelope for autonomous operations. If certain flight regions need to be restricted due to aircraft handling characteristics (as an example, regions of higher departure susceptibility), these should be indicated in a clear way that shows the full F-16 aircraft envelope and then the envelope of the proposed solution. Significant changes to the baseline F-16 aircraft envelope are not expected in this work. An example of an envelope restriction is shown in Figure 4 where the gray region represents the aircraft envelope, the blue region represents the autonomy system engaged region and the orange region represents the automatic autonomy disengagement region. Safety sandbox limits must be either statically defined ahead of time or dynamically calculated. The safety limits will be made available on the mission computer as part of the aircraft state space, and will be available to the M&S environment, SIL, and HIL to the maximum extent practicable.
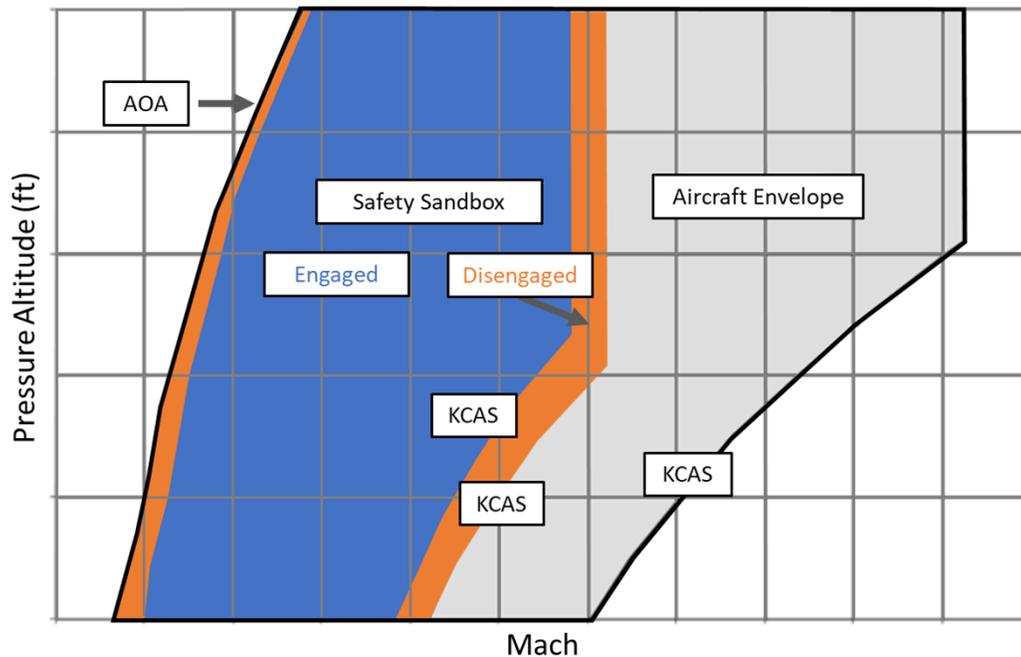
Figure 4. Example safety sandbox showing engaged and disengaged regions. The intent is to restrict the envelope as minimally as possible in angle-of-attack (AOA), calibrated airspeed (KCAS), Mach, and other factor parameters.

The safety sandbox must show the pilot who is in control of a given function at any given time. This should be able to be clearly displayed and the pilot should be notified when any system is disengaged through the safety sandbox or if the system trips off. The notifications will be clear and unambiguous to ensure flight safety and expressed through the HMI.

Proposers should describe the extent to which the safety sandbox is expected to restrict the aircraft operating envelope. While safety is the primary consideration, a secondary consideration is to otherwise minimize restrictions on the operating envelope.

4. **Technical Objective 4: A technical solution that is usable on multiple F-16 variants**

It is anticipated that the first two aircraft to be converted are F-16Ds. These two-seat aircraft are anticipated to be Block 30 and Block 32 with hybrid flight control computers (HFLCCs) and center display units in one or both seats. Proposers should specify any particular equipment or software assumed to be installed on the aircraft beyond those listed above. For example, if the solution requires the installation of an automatic ground collision avoidance system (Auto GCAS).

However, operational F-16s in the U.S. Air Force (USAF) come in many variants. They can generally be broken into F-16C models (single seat), F-16D models (two seats), and pre and post-block aircraft. Additionally, not all aircraft within a block are configured the same due to ongoing upgrades across the fleet. A single squadron often contains multiple aircraft variants.

It is desirable for the technical solution to be viable on both C and D model F-16s and both pre-block (Blocks 30 and 32) and post-block (Blocks 40, 42, 50, and 52) aircraft. Proposers should identify the specific variant(s) of F-16 aircraft on which their proposed technical solution is anticipated to be viable without modification. It is not necessary to show how the proposed technical solution would work on these additional F-16s variants, only to identify those variants to which the proposed technical solution will be viable without significant modifications.

Proposers should also identify if their proposed technical solution is reasonably transferable to other types of F-16s or other aircraft. A high-level discussion should be included to identify what is required to transfer the proposed technical solution to other types of F-16s or other aircraft. Again, it is not necessary to show how the proposed technical solution would work on these additional F-16s variants, only to identify those variants to which the proposed technical solution will reasonably transfer. At most, proposers should include a sentence or two explaining the changes necessary.

While the extent to which the proposed technical solution addresses the USAF F-16 fleet (i.e. which and how many type(s) of F-16 aircraft the proposed technical solution could be applied to) is important, cross-block applicability is less important than proposing a high technical readiness level (TRL) solution that leverages prior work, especially if portions of the prior work have been certified as airworthy by the USAF.

5. **Technical Objective 5: The technical solution will include hardware interfaces to F-16 mission systems.**

Proposers should propose hardware communications connections (both Ethernet and 1553 wiring as applicable) between the mission computer and appropriate aircraft stations (wing, chin, pylons, etc.) and locations for the mission systems listed below.

The mission computer should be capable of sending control inputs to and receiving data feeds from the aircraft mission systems listed in Table 1 (read/write access is assumed unless specified otherwise) as specified for each option.

Table 1. Mission computer interfaces to mission systems.

Mission System Description	Phase 2 Base and Phase 3 Option (first two F-16D aircraft)	Additional Aircraft Options (follow-on F-16C aircraft)
1553 Interconnect (read-write desired but read-only acceptable)	H, S	H, S
TSPI pods, such as Cubic SLATE or Collins Aerospace CRIIS	H, S	H, S
IP Datalink (with encryptor or built-in encryption)	H, S	H, S

Mission System Description	Phase 2 Base and Phase 3 Option (first two F-16D aircraft)	Additional Aircraft Options (follow-on F-16C aircraft)
Lockheed Martin Legion Pod Ethernet connection	H	H, S
Northrop Grumman APG-83 Active Electronically Scanned Array (AESA) fire control radar	No	H, S
ALQ-213	H*	H, S
Angry Kitten Pod	H*	H, S
Link-16	H*	H, S
Targeting pods such as the Lockheed Martin Sniper pod or the Northrup Grumman LITENING pod	H*	H, S

Note: H indicates that a hardware interconnect is desired, S indicates that a software interface is also desired, No indicates no connection is desired, H* indicates that hardware interfaces are desired for these systems for the F-16D aircraft being modified for Phases 2 and 3, but should only be pursued if they have minimal impact to the schedule

6. **Technical Objective 6: The technical solution will be designed to accommodate a safety pilot and an evaluation pilot (applies only to Phase 2 and Phase 3 option)**

For ACE TA4 Phase 2 and Phase 3 research, a two-seat F-16 variant is needed to allow for a safety pilot and an evaluation pilot. This is to enable the evaluation pilot to perform a dual-operational task created by another technical area that consists of a pilot performing a dual-operational management task while simultaneously monitoring an AI algorithm performing WVR maneuvering, colloquially known as dogfighting. The safety pilot will ensure safe execution and monitor the aircraft and the evaluation pilot. System design should consider the seat position and setup for both the safety pilot and evaluation pilot, to include safety overrides, displays (both safety displays and those required for a given task), and location of switches.

7. **Technical Objective 7: Paddle Off and On Capability**

A capability to turn the autonomy off and on inflight, smoothly switching between autonomous and piloted control is desired. Ideally, the pilot can test autonomy solutions in a real-world setting while being able to disengage the autonomy at any time by "paddling off" and taking control of the aircraft and mission systems. This allows the pilot to both provide feedback to developers and to act as a safety net or runtime assurance for the autonomy. It is also beneficial

for the pilot to be able to paddle the autonomy back on, seamlessly re-engaging after the pilot has made adjustments or corrections.

D.   Proposal Assumptions

The following assumptions should be used in preparing the proposal:

1. There will always be a pilot onboard the aircraft.
2. The airworthiness will be obtained through the USAF at a demonstration value level. The airworthiness effort will be limited to assessing the technical capability of maintaining the integrity of the safety sandbox and integration with the aircraft and ultimately the baseline configuration of the platform when the safety sandbox is active. Specifically, it will not address the autonomous agent software or other software running in the safety sandbox.
3. The performer will support all USAF airworthiness efforts. The performer will provide documentation in support of the airworthiness process. The performer will support testing required by the airworthiness effort.
4. The performer will support all security certification requirements.
5. The aircraft will be provided as GFE.
6. The aircraft mission systems listed will be provided as GFE. Aircraft may have some, none, or all of these systems.
7. Pilots, aircraft, and operation and maintenance of the aircraft will be provided by the USAF.
8. Source code is an expected deliverable for all software running on the mission computer and in the various simulation environments.
9. The government will obtain at least government purpose rights in noncommercial technical data, noncommercial computer software, and noncommercial computer software documentation. Any claims for intellectual property rights shall be explicitly stated in the proposal.

Additional assumptions should be listed explicitly within the proposal.

E.   Program Metrics, Deliverables, and Milestones

For the Government to evaluate the effectiveness of a proposed solution in achieving the stated program objectives, proposers should note that the Government hereby promulgates the following program metrics, deliverables and milestones that may serve as the basis for determining whether satisfactory progress is being made to warrant continued funding of the program. Although the following notional program metrics, deliverables, and milestones are specified, performers should note that the Government intends these goals to bound the scope of effort, while affording the maximum flexibility, creativity, and innovation in proposing solutions to the stated problem. Proposals should cite the quantitative and qualitative success criteria that the proposed effort will achieve by the time of each Phase's program metric measurement. Proposers may adjust the schedule of the deliverables to reflect expected timelines and are encouraged to adjust the milestones and deliverables to meet program objectives. A notional high-level schedule is shown in Figure 5.

Table Unclassified	FY 2022				FY 2023				FY 2024			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Task					**Phase 2 Base Period: 15 Months**				**Phase 3 Option 1: 15 Months**			
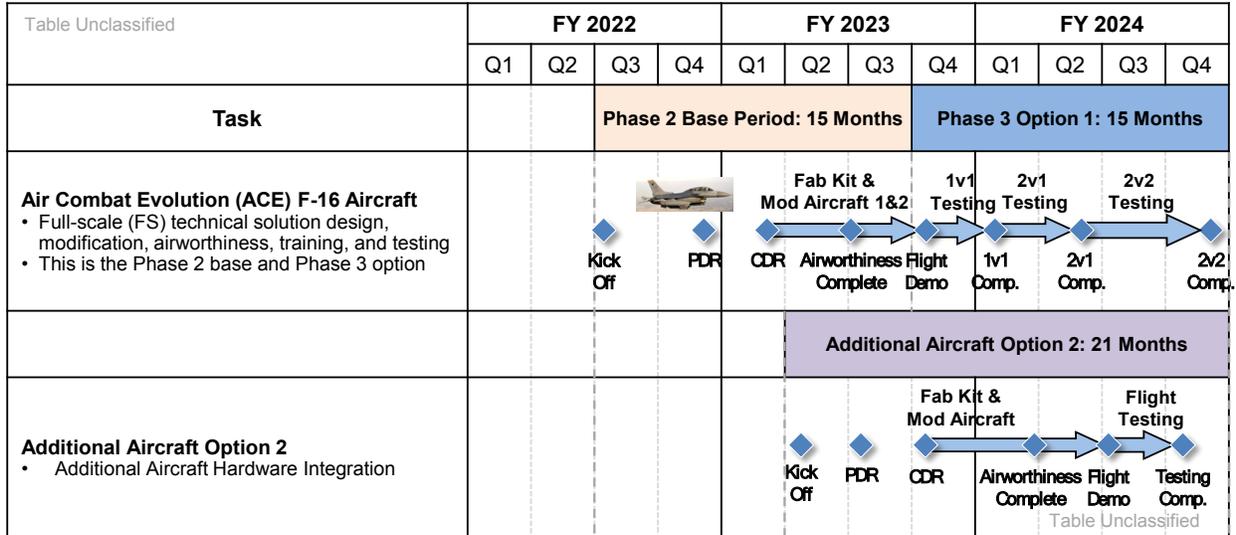
Figure 5. Notional Schedule. Note: The schedule for the additional aircraft hardware option (Option 2) and the additional aircraft mission systems software integration option (Option 3) will be dependent on the specific solution proposed and may begin before FY2023. Furthermore, due to the number of systems and variety of approaches to develop the software for mission systems integration, a notional schedule for the additional aircraft mission systems software integration option (Option 3) is not displayed.

Due to the design of the program, significant cooperation and coordination across performers is required. Because of this requirement, the EIT hosts events called Integration Quarterlies which are attended by representatives from each performer and typically last two days. Travel for 2-5 team members to Laurel, MD for these events should be planned for all of Phase 2 and the first 2 quarters of Phase 3. In addition to the milestones below, the performer should expect quarterly program reviews (QPR) which may be conducted in conjunction with integration quarterlies or at the performer's site. The QPRs will update the Government team on status, risks, and plans.

Table 2. Program Milestones and Metrics for Phases 2 and 3

Phase 2 (Base Period)	**Phase Deliverables:** 1. **First F-16D aircraft modified as human-on-the-loop, safety-sandboxed testbed aircraft** including all software and supporting hardware 2. **A modeling and simulation environment** 3. **A software-in-the-loop real-time simulation capability and/or a hardware-in-the-loop simulator of the technical solution** 4. **A software development kit (SDK) for third party providers** which also **provides the ability to independently expand message sets** 5. **Phase 2 final report**
3 Months	Milestone: Preliminary Design Review (PDR) Technical Solution Size, Weight, Power and Cost (SWaP-C) Threshold: Meet aircraft capacity for SWaP with 20% margin Kit costs at proposed costs with 20% margin
6 Months	Milestone: Critical Design Review (CDR) technical solution SWaP-C Threshold: Meet aircraft capacity for SWaP with 10% margin Kit costs at proposed cost with 10% margin
	Percent of proposed objectives covered by the technical solution design

	Threshold: 75% Objective: 100%
8 Months	Initial delivery of a modeling and simulation environment compatible with EIT requirements
9 Months	Kit SWaP-C matches CDR SWaP-C Threshold: 75% match or are lower than CDR values Objective: 100% match or are lower than CDR values
10 Months	Delivery of software-in-the-loop real-time simulation capability and/or a hardware-in-the-loop simulator of the technical solution and a SDK. The minimum requirement for a hardware-in-the-loop simulator is a representative mission computer and associated interfaces.
12 Months	Milestone: Airworthiness and security requirements complete
13 Months	A report or presentation characterizing the latency and jitter of each interface component and end-to-end performance. For example, the interface which reads-in F-16 state data would be characterized by a distribution and include a mean or median value as well as an appropriate value for variance. Additionally, round-trip time from ingest of state data to control actuation should be characterized. Threshold: <5ms latency in platform and datalink interfaces with minimal jitter 　　　　　<50ms end-to-end latency (ingest of state data to control actuation) Objective: <1ms latency in platform and datalink interfaces with minimal jitter 　　　　　<30ms end-to-end latency (ingest of state data to control actuation)
15 Months	Milestone: Flight test of F-16D aircraft modified as human-on-the-loop, safety-sandboxed testbed aircraft which at a minimum demonstrates a functional safety sandbox for the flight control system and all-axis autonomous flight control from the mission computer. A Phase 2 final report will be provided NLT 30 days after conclusion of the flight test window. Percent of proposed objectives demonstrated by the technical solution Threshold: 90% Objective: 100%
Phase 3 (Option 1)	Phase Deliverables: 　1. Second F-16D aircraft modified as human-on-the-loop, safety-sandboxed testbed aircraft 　2. Final Report
17 Months	Milestone: First flight of the second F-16D aircraft modified as human-on-the-loop, safety-sandboxed testbed aircraft
19 Months	Program milestone: 1v1 competition
23 Months	Program milestone: 2v1 competition
29 Months	Program milestone: 2v2 competition
30 Months	Final Report/Lessons Learned

Table 3. Program Milestones and Metrics for Additional Aircraft Hardware Option

Option 2	Deliverables: 1. F-16C aircraft modified as human-on-the-loop, safety-sandboxed testbed aircraft including all software and supporting hardware
3 Months	Milestone: Preliminary Design Review (PDR) Technical Solution Size, Weight, Power and Cost (SWaP-C) Threshold: Meet aircraft capacity for SWaP with 20% margin Kit costs at proposed costs with 20% margin
6 Months	Milestone: Critical Design Review (CDR) technical solution SWaP-C Threshold: Meet aircraft capacity for SWaP with 10% margin Kit costs at proposed cost with 10% margin
	Percent of proposed objectives covered by the technical solution design Threshold: 75% Objective: 100%
9 Months	Kit SWaP-C matches CDR SWaP-C Threshold: 75% match or are lower than CDR values Objective: 100% match or are lower than CDR values
12 Months	Milestone: Airworthiness and security requirements complete
15 Months	Milestone: Delivery of first 2 F-16C aircraft modified as human-on-the-loop, safety-sandboxed testbed aircraft for flight test Percent of proposed objectives demonstrated by the technical solution Threshold: 90% Objective: 100%

Deliverables for the additional aircraft mission systems software integration option should at a minimum include a software development and testing plan, artifacts required for airworthiness and security certification, software, and an SDK for third party providers which also provides the ability to independently expand message sets. Due to the flexibility afforded in this option, milestones should be proposed by the performer. Ideally, they will align with milestones associated with the additional aircraft hardware option.

F.   Major Review Descriptions and Expectations

The Performer will execute a PDR, CDR, and TRRs with content, entrance, and exit criteria tailored from a recognized industry or military standard for appropriate application to a technology demonstration program. Proposals should clearly address how these standards will be tailored in the proposed effort. Any tailoring of design review content and criteria must include an assessment of the design maturation and technical risk, and incorporate demonstrable technology maturation progress and achievements. System design review guidance is outlined below for each required review.

Preliminary Design Review (PDR)

The objective of the PDR is to determine the design maturity of the selected system concept to ensure consistency with ACE program goals. The performer will present the system preliminary design baseline with closure around documented requirements, updated program risks, and updated program cost/schedule through completion of the flight test program. The review will allow DARPA to assess the feasibility of the design to complete a meaningful flight test program within program cost and schedule constraints and provide guidance.

Minimum information to be provided:
- Requirements Development – Interface and requirements are complete. Initial verification statements are complete and external interfaces are documented.
- Design Definition – Assess the allocated design documented in subsystem requirements. Preliminary design is complete to the subsystem/configuration item level, PDR requirements are traceable to system-level requirements, and the design closes around documented requirements and adequately demonstrates that performance achieves minimum and maximum threshold ranges, and meets size, weight, power and cost (SWaP-C) constraints.
- Airworthiness – All expected airworthiness artifacts have been identified and an airworthiness plan and schedule have been developed and approved in coordination with the government airworthiness team. Airworthiness planning must clearly indicate how the certification basis will be created, approved by the certification authority, and used to support first flight release and final airworthiness certification. High risk airworthiness items have been identified and mitigations put in place.
- Software Development – A development plan with processes and metrics to measure progress is complete.
- Risk Management – Risks must include all design risks.
- Technology Maturation – Desired technology maturation can be achieved via planned development within program budget and schedule. Test plans define objectives and expected results that will validate design proof-of-concept. Draft Test and Evaluation Master Plan (TEMP) for Phases 2 and 3.
- Cost – Revised BOM cost based on preliminary design is documented and within established cost metrics.
- Updated program schedule to include testing and analysis timelines with feasible path to flight test program within established schedule metrics.
- A security certification plan will be provided to the Government.

Critical Design Review (CDR)

The CDR demonstrates that the system design is stable, expected to meet performance requirements, and is on track to achieve cost goals as evidenced by the detailed design documentation. At this point, the system has reached the necessary level of maturity to start fabricating, integrating, and testing pre-production articles with acceptable risk. The CDR will allow DARPA to assess the feasibility of the design to deliver a demonstrator that meets performance objectives within program cost and schedule constraints. The CDR entrance and exit criteria will be fully developed prior to the event and agreed to by DARPA.

Minimum Information to be provided:

- Requirements Development – ACE TA4 requirements are complete. Component verification methods and statements for each requirement are established. Traceability of requirements across all levels of the system hierarchy must be documented. All interface requirements, including hardware to software are documented.
- Design Definition – ACE TA4 critical design is complete to the component level and achieves compliance with all associated requirements. System design is sufficient to develop manufacturing-quality product drawings. All interfaces are under configuration control. The design closes around documented requirements and achieves ACE TA4 technical objectives.
- Airworthiness – Technical Airworthiness Authority (TAA) approval of the proposed certification basis has been attained. Draft airworthiness artifacts exist. No high-risk airworthiness items remain.
- Autonomy & Software Development – Architectures are fully defined and show traceability to ACE TA4 technical objectives. A detailed software test & validation plan is established in coordination with the EIT.
- Risk Management – All design, integration and fabrication risks are captured and mitigation plans defined. Risks are mitigated to an acceptable level that supports component fabrication and software development. Initial Environmental Hazard Mitigation Plan is prepared.
- Technology Maturation – System design is fully substantiated by documented analysis, test, and demonstration results. A detailed test & demonstration approach is defined, including component, subsystem and system level test events for both ground and flight test.
- System Cost – System production cost are established. A complete EBOM is defined and supports procurement of all materials to complete the proposed ACE TA4 F-16D modifications within cost objectives
- Program Schedule – Program schedule is updated and shows feasible path to support all testing and demonstration activities
- Design Baseline – The design baseline is established and demonstrates that it effectively meets technical performance metrics and the ACE program goals. Design baseline is placed under configuration control.
- Security – Mature plans exist to meet all security requirements and there are no remaining high-risk security items.

Test Readiness Review (TRR)

A TRR will walk through test objectives, procedures, safety and resources to assess readiness for a ground or flight test event. At a minimum, TRRs will include representatives from the performer team, Government team, and test facility. A TRR will determine the completeness of the test procedures to be applied in the proposed test as well as their alignment with previously planned test outlines and descriptions. TRRs should identify which requirements will be verified by the test event. Test hardware and instrumentation should be identified. Limitations of the test should be discussed and possible mitigations considered. Predicted results should be presented. TRRs should be conducted sufficiently ahead of the test event to allow adjustments based on Government feedback. DARPA approval of the TRR is required prior to entering into test.

Prior to each TRR, the performer should confirm the following:

- All hardware is available or will be delivered in time with a reasonable margin for system integration and demonstration;
- All firmware/software is in a final review/simulation and under configuration control;
- A military flight release has been obtained from the airworthiness authority (as applicable)
- The test article(s) and the procedures and plans for their use have been submitted to the safety entity responsible for evaluating the test safety;
  - Training material is complete for personnel to be involved in the testing concerning the objectives of the test(s) and actions personnel are responsible for accomplishing;
  - Resources (people equipment, and materials) needed to accomplish the testing are available and ready for testing;
  - The equipment, facilities, and ranges (if applicable) are evaluated as ready for test;
  - Documentation of evaluations, assessments, plans, procedures, training, and other factors applicable to tests are available for Government review.

II.   Award Information

A.   General Award Information

A single award is anticipated. The resources made available under this BAA will depend on the quality of the proposals received and the availability of funds.

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

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

Proposers looking for innovative, commercial-like contractual arrangements are encouraged to consider requesting Other Transactions. To understand the flexibility and options associated with

Other Transactions, consult http://www.darpa.mil/work-with-us/contract-management#OtherTransactions.

In accordance with 10 U.S.C. § 2371b(f), the Government may award a follow-on production contract or Other Transaction (OT) for any OT awarded under this solicitation if: (1) that participant in the OT, or a recognized successor in interest to the OT, successfully completed the entire prototype project provided for in the OT, as modified; and (2) the OT provides for the award of a follow-on production contract or OT to the participant, or a recognized successor in interest to the OT.

In all cases, the Government contracting officer shall have sole discretion to select award instrument type, regardless of instrument type proposed, and to negotiate all instrument terms and conditions with selectees. DARPA will apply publication or other restrictions, as necessary, if it determines that the research resulting from the proposed effort will present a high likelihood of disclosing performance characteristics of military systems or manufacturing technologies that are unique and critical to defense. Any award resulting from such a determination will include a requirement for DARPA permission before publishing any information or results on the program. For more information on publication restrictions, see the section below on Fundamental Research.

B. Fundamental Research

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

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

As of the date of publication of this solicitation, the Government expects that program goals as described herein either cannot be met by proposers intending to perform fundamental research or the proposed research is anticipated to present a high likelihood of disclosing performance characteristics of military systems or manufacturing technologies that are unique and critical to defense. Therefore, the Government anticipates restrictions on the resultant research that will require the awardee to seek DARPA permission before publishing any information or results relative to the program.

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

For certain research projects, it may be possible that although the research to be performed by a potential awardee is non-fundamental research, its proposed subawardee's effort may be fundamental research. It is also possible that the research performed by a potential awardee is fundamental research while its proposed subawardee's effort may be non-fundamental research. In all cases, it is the potential awardee's responsibility to explain in its proposal which proposed efforts are fundamental research and why the proposed efforts should be considered fundamental research.

III. Eligibility Information

A. Eligible Applicants

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

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

a. FFRDCs

FFRDCs are subject to applicable direct competition limitations and cannot propose to this solicitation in any capacity unless they meet the following conditions. (1) FFRDCs must clearly demonstrate that the proposed work is not otherwise available from the private sector. (2) FFRDCs must provide a letter, on official letterhead from their sponsoring organization, that (a) cites the specific authority establishing their eligibility to propose to Government solicitations and compete with industry, and (b) certifies the FFRDC's compliance with the associated FFRDC sponsor agreement's terms and conditions. These conditions are a requirement for FFRDCs proposing to be awardees or subawardees.

b. Government Entities

Government Entities (e.g., Government/National laboratories, military educational institutions, etc.) are subject to applicable direct competition limitations. Government Entities must clearly demonstrate that the work is not otherwise available from the private sector and provide written documentation citing the specific statutory authority and contractual authority, if relevant, establishing their ability to propose to Government solicitations and compete with industry. This information is required for Government Entities proposing to be awardees or subawardees.

c. Authority and Eligibility

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

B. Organizational Conflicts of Interest

FAR 9.5 Requirements

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

Agency Supplemental OCI Policy

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

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

- The name of the DARPA office receiving the support;

- The prime contract number;

- Identification of proposed team member (subawardee, consultant) providing the support; and

- An OCI mitigation plan in accordance with FAR 9.5.

Government Procedures

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

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

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

C. **Cost Sharing/Matching**

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

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

IV. Application and Submission Information

A. Address to Request Application Package

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

B. Content and Form of Application Submission

All submissions, including abstracts and proposals must be written in English with type not smaller than 12-point font. Smaller font may be used for figures, tables and charts. Copies of all documents submitted must be clearly labeled with the DARPA BAA number, proposer organization and proposal title/proposal short title.

1. Proposals Format

All proposals must be in the format given below. The typical proposal should express a consolidated effort in support of one or more related technical concepts or ideas. Disjointed efforts should not be included into a single proposal. Proposals shall consist of two volumes: 1) Volume I, Technical and Management Proposal (composed of 3 parts) and 2) Volume II, Cost Proposal. Volume 1 of the proposal is limited to 60 pages. Bracketed numbers before each section denote recommended page limits.

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

  a) Volume I, Technical and Management Proposal
   (1) Section I: Administrative
    (a) Cover Sheet to Include

(1) BAA Number: HR001122S0015;
(2) Air Combat Evolution (ACE) Technical Area 4 Phases 2 and 3;
(3) Lead Organization submitting proposal;

(4) Type of organization, selected among the following categories: "LARGE BUSINESS", "SMALL DISADVANTAGED BUSINESS", "OTHER SMALL BUSINESS", "HBCU", "MI", "OTHER EDUCATIONAL", OR "OTHER NONPROFIT";

(5) Proposer's reference number (if any);

(6) Other team members (if applicable) and type of organization for each;

(7) Proposal title;

(8) Technical point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available), electronic mail (if available);

(9) Administrative point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available), electronic mail (if available);

(10) Total funds requested from DARPA, and the amount of cost share (if any); and

(11) Date proposal was submitted.

(2) Section II: Summary of Proposal

A. {1} Technical rationale, technical approach and constructive plan for accomplishment of technical goals in support of innovative claims and deliverable creation. (In the full proposal, this section should be supplemented by a more detailed plan in Section III of the Technical and Management Proposal.)

B. {0.5} Innovative claims for the proposed research. This section should succinctly describe the uniqueness and benefits of the proposed approach relative to the current state-of-art alternate approaches.

C. {0.5} Deliverables associated with the proposed research and the plans and capability to accomplish technology transition and commercialization. Include in this section all proprietary claims to the results, prototypes, intellectual property, or systems supporting and/or necessary for the use of the research, results and/or prototype. If there are no proprietary claims, this should be stated. For forms to be completed regarding intellectual property, see Section IV.B.2.i of this BAA. There will be no page limit for the listed forms.

D. {0.5} General discussion of other research or work in this area.

E. {0.5} A clearly defined organization chart for the program team which includes, as applicable: (1) the programmatic relationship of team member; (2) the unique capabilities of team members; (3) the task of responsibilities of team members; (4) the teaming strategy among the team members; and (5) the key personnel along with the amount of effort to be expended by each person.

(3) Section III: Detailed Proposal Information

This section provides the detailed discussion of the proposed work necessary to enable an in-depth review of the specific technical and managerial issues. Specific attention must be given to addressing both risk and payoff of the proposed work that make it desirable to DARPA.

A. {5 to 10} Detailed technical approach enhancing and completing the Summary of Proposal. Proposals should clearly explain the technical approach(es) that will be employed to meet or exceed each program objective and metric and provide ample justification as to why the

approach (es) is/are feasible. The detailed technical approach should include the following items as well:

    a.   Because of the timeframe and scope of the effort in this solicitation, the proposed technical solution is anticipated to rely on prior work. The proposer should clearly identify what parts of their proposed technical solution are prior work versus new work. The proposer should describe the heritage of the prior work as well. The proposer should include information on past performance on similar programs.

    b.   The proposer should describe the system safety elements in their proposed technical solution, such as disconnects, performance limitations, etc.

    c.   The proposer should discuss their planned data gathering process.

    d.   The proposer should identify all aircraft modifications required by their proposed technical solution, ideally seeking to minimize those modifications.

    e.   To the extent possible, the proposer should identify the input and output methodologies (1553, Ethernet, etc.), anticipated data sets, frame rate, real time, operating system, tools, etc.

    f.   The proposer should describe the technical solution interactions with the mission computer and the aircraft.

    g.   The proposer should characterize the anticipated size (dimensions) of the mission computer(s) required.

    h.   The proposer should characterize any spare hardware and software resources which could be available in the mission computer

B. {2 to 5} Description of the results, products and transferable technology to supplement information included in the Summary of Proposal. This should also address mitigation of life-cycle and sustainment risks associated with transitioning intellectual property for U.S. military applications, if applicable. See also Section IV.B.2.i of this BAA., "Intellectual Property."

C. {5 to 10} Statement of work (SOW) – Clearly define the technical tasks/subtasks to be performed, their durations and dependencies among them. The SOW should be organized by a work breakdown structure (WBS) that is the same as the WBS used in the cost proposal. The WBS, should separate the effort into a logical framework for execution. The SOW should be developed so that the Phase 2 (Base Period), Phase 3 (Option 1), the additional aircraft hardware option (Option 2), and the additional aircraft mission systems software integration option (Option 3) of the program are separately defined. Where the effort consists of multiple portions that could reasonably be partitioned for purposes of funding, these should be identified as options with separate portions of the SOW and cost estimates for each.

The WBS should contain at a minimum the following items:

- Non-Recurring Engineering (NRE),
- Kit fabrication,
- Kit installation,
- Airworthiness documentation,
- Security documentation, and
- Ground and flight test support.

For each SOW task/subtask, provide:

- A general description of the objective (for each defined task/activity);

- A detailed description of the approach to be taken to accomplish each defined task/activity;
- Identification of the primary organization responsible for task execution (prime, sub, team member, by name, etc.);
- The completion criteria for each task/activity - a product, event, or milestone that defines its completion;
- Define all deliverables (reporting, data, reports, software, etc.) to be provided to the Government in support of the proposed research tasks/activities; and
- Clearly identify any tasks/subtasks (to be performed by either an awardee or subawardee) that will be accomplished on-campus at a university, if applicable.

Do not include any proprietary information in the SOW.

D. {2} A schedule and table of measurable milestones for the proposed research. Measurable milestones should capture key development points in tasks and should be clearly articulated and defined in time relative to start of effort. The schedule and milestones should enable and support a decision for the next part of the effort. Additional interim non-critical management milestones are also highly encouraged at regular intervals. The schedule should include a detailed aircraft modification schedule.

Do not include any proprietary information in the schedule or table of milestones.

E. {2} Comparison with other ongoing research and programs indicating advantages and disadvantages of the proposed effort.

F. {2} Discussion of proposer's previous accomplishments and work in closely related research areas.

G. {1} Detail support enhancing that of Summary of Proposal, including formal teaming agreements which are required to execute this program.

H. {0.5} Description of Security Management architecture and/or approach for the proposed effort. Detail unique additional security requirements information system certification expertise for controlled unclassified information (CUI) or classified processing, OPSEC, program protection planning, test planning, transportation plans, work being performed at different classification levels and/or utilizing test equipment not approved at appropriate classification level (may not be applicable for fundamental research).

I. {0.5} Description of the facilities that would be used for the proposed effort.

J. The proposer should include a two-slide summary for each of the proposed options 1) the Phase 2 (Base Period); 2) the Phase 3 (Option 1); 3) the additional aircraft hardware option (Option 2); and 4) the additional aircraft mission systems software integration option (Option 3—if applicable). Each option proposed should have 2 slides that quickly and succinctly indicates the concept overview, key innovations, expected impact, and other unique aspects of the proposal. The two-slide summaries must be in MS PowerPoint™. The format for the summary slides is included as APPENDIX 1 to this BAA and does not count against the page limit.

K. Mission Systems Software Integration Option (Option 3){Limit 5 pages per mission system. Option 3 pages do not count against the overall proposal page limit} Provide a detailed discussion of the technical approach for software integration of each mission system. Proposals should clearly explain the technical approach(es) that will be employed to meet or exceed each mission system software integration and provide ample justification as to why the approach(es) is/are feasible.

        b)   Volume II, Cost Proposal

All proposers, including FFRDCs, must submit the following:

        (1)   Cover Sheet to Include

(1) BAA Number: HR001122S0015;
(2) Air Combat Evolution (ACE) Technical Area 4 Phases 2 and 3;
(3) Lead Organization submitting proposal;
(4) Type of organization selected among the following categories: "LARGE BUSINESS", "SMALL DISADVANTAGED BUSINESS", "OTHER SMALL BUSINESS", "HBCU", "MI", "OTHER EDUCATIONAL", OR "OTHER NONPROFIT";
(5) Proposer's reference number (if any);
(6) Other team members (if applicable) and type of organization for each;
(7) Proposal title;
(8) Technical point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available), electronic mail (if available);
(9) Administrative point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available) and electronic mail (if available);
(10) Date proposal was submitted;
(11) Place(s) of performance;
(12) Award instrument requested: cost-plus-fixed-fee (CPFF), cost-contract—no fee, cost sharing contract – no fee, or other type of procurement contract (specify), or Other Transaction;
(13) Total funds requested from DARPA and the amount of cost share (if any); AND
(14) Total proposed cost separated by basic award and option(s) (if any);
(15) Name, address and telephone number of the proposer's cognizant Defense Contract Management Agency (DCMA) administration office (if known);
(16) Name, address and telephone number of the proposer's cognizant Defense Contract Audit Agency (DCAA) audit office (if known);
(17) DUNS number;
(18) TIN number;
(19) CAGE Code;
(20) Subawardee Information; and
(21) Proposal validity period.

        (2)   Additional Cost Proposal Information
            (a)   Supporting Cost and Pricing Data

The proposer should include supporting cost and pricing information in sufficient detail to substantiate the summary cost estimates and should include a description of the method used to estimate costs and supporting documentation.

The proposer should use the same WBS for costing that was used in the Volume I, Technical and Management Proposal.

The proposer should include a one-slide cost summary of the proposal in MS PowerPoint™ that quickly and succinctly indicates cost by top level program element and proposed award type. The format for the summary slide is included as APPENDIX 3 to this BAA.

(b)   Cost Breakdown Information and Format

Detailed cost breakdown to include:
- Total program costs broken down by 1) base and options, 2) WBS task, and 3) major cost items (direct labor, including labor categories; subcontracts; materials; other direct costs; overhead charges, etc.);
- Documentation supporting the reasonableness of the proposed equipment costs (vendor quotes, past purchase orders/purchase history, detailed engineering estimates, etc.) shall be provided;
- An itemization of major subcontracts and equipment purchases;
- Major program tasks by fiscal year;
- A summary of projected funding requirements by month;
- The source, nature and amount of any industry cost-sharing
- Identification of pricing assumptions of which may require incorporation into the resulting award instrument (e.g., use of Government Furnished Property/Facilities/Information, access to Government Subject Matter experts, etc.)

Tables included in the cost proposal should be in an editable (e.g. MS Excel) format with calculation formulas intact. NOTE: If PDF submissions differ from the Excel submission, the PDF will take precedence.

The Government requires that proposers use the provided MS Excel™ DARPA Standard Cost Proposal Spreadsheet in the development of their cost proposals. A customized cost proposal spreadsheet may be an attachment to this solicitation. If not, the spreadsheet can be found on the DARPA website at http://www.darpa.mil/work-with-us/contract-management (under "Resources" on the right-hand side of the webpage). All tabs and tables in the cost proposal spreadsheet should be developed in an editable format with calculation formulas intact to allow traceability of the cost proposal. This cost proposal spreadsheet should be used by the prime organization and all subcontractors. In addition to using the cost proposal spreadsheet, the cost proposal still must include all other items required in this announcement that are not covered by the editable spreadsheet. Subcontractor cost proposal spreadsheets may be submitted directly to the Government by the proposed subcontractor via e-mail to the address in Part I of this solicitation. **Using the provided cost proposal spreadsheet will assist the Government in a rapid analysis of your proposed costs and, if your proposal is selected for a potential award, speed up the negotiation and award execution process**.

Per FAR 15.403-4, certified cost or pricing data shall be required if the proposer is seeking a procurement contract award per the referenced threshold, unless the proposer

requests and is granted an exception from the requirement to submit cost or pricing data. Certified cost or pricing data are not required if the proposer proposes an award instrument other than a procurement contract (e.g., a grant, cooperative agreement, or other transaction.)

<div align="center">(c)   Subawardee Proposals</div>

The awardee is responsible for compiling and providing all subawardee proposals for the Procuring Contracting Officer (PCO)/Grants Officer (GO)/Agreements Officer (AO), as applicable. Subawardee proposals should include Interdivisional Work Transfer Agreements (ITWA) or similar arrangements. Where the effort consists of multiple portions which could reasonable be partitioned for purposes of funding, these should be identified as options with separate cost estimates for each.

All proprietary subawardee proposal documentation, prepared at the same level of detail as that required of the awardee's proposal and which cannot be uploaded with the proposed awardee's proposal, shall be provided to the Government either by the awardee or by the subawardee organization when the proposal is submitted. Subawardee proposals submitted to the Government by the proposed awardee should be submitted in a sealed envelope that the proposed awardee will not be allowed to view. The subawardee must provide the same number of copies to the PCO/GO/AO as is required of the awardee. See Section IV.B.3 of this BAA for proposal submission information.

<div align="center">(d)   Other Transaction Requests</div>

All proposers requesting an OT must include a detailed list of milestones. Each milestone must include the following:
- milestone description;
- completion criteria;
- due date; and
- payment/funding schedule (to include, if cost share is proposed, awardee and Government share amounts).

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

<div align="center">

2.   Additional Proposal Information

a)   Proprietary Markings

</div>

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

b) **Security Information**
(1) Program Security Information
(a) Program Security

Proposers should include with their proposal any proposed solution(s) to program security requirements unique to this program. Common program security requirements include but are not limited to: operational security (OPSEC) contracting/sub-contracting plans; foreign participation or materials utilization plans; program protection plans (which may entail the following) manufacturing and integration plans; range utilization and support plans (air, sea, land, space and cyber); data dissemination plans; asset transportation plans; classified test activity plans; disaster recovery plans; classified material / asset disposition plans and public affairs / communications plans.

(2) Controlled Unclassified Information (CUI)

For unclassified proposals containing controlled unclassified information (CUI), applicants will ensure personnel and information systems processing CUI security requirements are in place.

(a) CUI Proposal Markings

If an unclassified submission contains CUI or the suspicion of such, as defined by Executive Order 13556 and 32 CFR Part 2002, the information must be appropriately and conspicuously marked CUI in accordance with DoDI 5200.48. Identification of what is CUI about this DARPA program will be detailed in a DARPA CUI Guide and will be provided as an attachment to the BAA or may be provided at a later date.

(b) CUI Submission Requirements

Unclassified submissions containing CUI may be submitted via DARPA's BAA Website (https://baa.darpa.mil) in accordance with Part II Section VIII of this BAA.

(c) Proposers submitting proposals involving the pursuit and protection of DARPA information designated as CUI must have, or be able to acquire prior to contract award, an information system authorized to process CUI information IAW NIST SP 800-171 and DoDI 8582.01.

(3) Classified Submissions

For classified proposals, applicants will ensure all industrial, personnel and information systems processing security requirements are in place and at the appropriate level (e.g., Facility Clearance Level (FCL), Automated Information Security (AIS), Certification and Accreditation (C&A) and any Foreign Ownership Control and Influence (FOCI) issues are mitigated prior to submission. Additional information on these subjects can be found at https://www.dcsa.mil/.

(a) Classified Proposal Markings

At this time, DARPA anticipates that proposals submitted in response to this BAA may generate or involve access to classified information. Classified submissions shall be transmitted and

marked in accordance with the following guidance. Security classification guidance via a Security Classification Guide (SCG) and/or DARPA DD Form 254, "DoD Contract Security Classification Specification," will be provided upon request.

Proposers are required to submit this request no later than February 16, 2022 2:00 p.m. (Eastern Time) to allow for adequate time for delivery of the material. The HR001122S0015 Security Classification Guide Request Form in Appendix 4 is the only method of request that will be accepted.

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

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

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

Submissions containing both classified information and CUI must be appropriately and conspicuously marked with the proposed classification level as well as ensuring CUI is marked in accordance with DoDI 5200.48.

<div align="center">(b)   Classified Submission Requirements and Procedures</div>

Proposers submitting classified information must have, or be able to obtain prior to contract award, cognizant security agency approved facilities, information systems and appropriately cleared/eligible personnel to perform at the classification level proposed. All proposer personnel performing Information Assurance (IA)/Cybersecurity related duties on classified Information Systems shall meet the requirements set forth in DoD Manual 8570.01-M (Information Assurance Workforce Improvement Program). Additional information on the subjects discussed in this section may be found at https://www.dcsa.mil/.

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

When a proposal includes a classified portion, and when able according to security guidelines, we ask that proposers send an e-mail to HR001122S0015@darpa.mil as notification that there is a classified portion to the proposal. When submitting a hard copy of the classified portion according to the instructions outlined below, proposers should submit six (6) hard copies of the

classified portion of their proposal and two (2) CD-ROMs containing the classified portion of the proposal as a single searchable PDF file.

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

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

- Hand-carried by an appropriately cleared and authorized courier to the DARPA Classified Document Registry (CDR). **At least five (5) business days prior to traveling**, and in accordance with the advance notification required as outlined in part I of this BAA, the courier shall contact the DARPA CDR at 703-526-4052 to coordinate arrival and delivery. The courier shall also contact the DARPA Program Security Representative (PSR), Charles "Chuck" Peterson, at (571) 218-4834, charles.peterson.ctr@darpa.mil.

    OR

- Mailed via U.S. Postal Service (USPS) Registered Mail or USPS Express Mail. All classified information will be enclosed in opaque inner and outer covers and double-wrapped. The inner envelope shall be sealed and plainly marked with the assigned classification and addresses of both sender and addressee. Senders should mail to the mailing address listed in the contact information herein. Prior to mailing, and in accordance with the advanced notification required as outlined in Part I of this BAA, proposers shall contact the DARPA PSR, Charles "Chuck" Peterson, at (571) 218-4834, charles.peterson.ctr@darpa.mil to coordinate submission.

The inner envelope shall be addressed to Defense Advanced Research Projects Agency, ATTN: Strategic Technology Office and Charles "Chuck" Peterson, with a reference to the BAA number.

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

Top Secret Information
Top Secret information must be hand-carried by an appropriately cleared and authorized courier to the DARPA CDR. Prior to traveling, the courier shall contact the DARPA CDR at 703-526-4052 to coordinate arrival and delivery. Pre-coordination must be provided no later than **February 21, 2022 2:00 p.m. (Eastern Time)**, to the DARPA PSR, Charles "Chuck" Peterson, at (571) 218-4834, charles.peterson.ctr@darpa.mil.

Sensitive Compartmented Information (SCI)

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

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

Special Access Program (SAP) Information

SAP information must be marked in accordance with DoDM 5205.07 Volume 4 and transmitted by specifically approved methods which will be provided by STO PSO or their staff.

Proposers choosing to submit SAP information from an agency other than DARPA are required to provide the DARPA Technical Office PSO written permission from the source material's cognizant Special Access Program Control Officer (SAPCO) or designated representative. For clarification regarding this process, contact the DARPA STO PSO, Mr. Jason Potter, at 703-526-2687 or Jason.potter@darpa.mil, or the DARPA SAPCO at 703-526-4102.

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

<div align="center">(c)   Unclassified Submissions</div>

DARPA anticipates that submissions received under this BAA will be unclassified. However, should a proposer wish to submit classified information, an unclassified email must be sent to the BAA mailbox requesting submission instructions from the STO PSO. If a determination is made that the award instrument may result in access to classified information, a SCG and/or DD Form 254 will be issued by DARPA and attached as part of the award.

<div align="center">(d)   Both Classified and Unclassified Submissions</div>

For a proposal that includes both classified and unclassified information, the proposal may be separated into an unclassified portion and a classified portion. The proposal should include as much information as possible in the unclassified portion and use the classified portion ONLY for classified information. The unclassified portion can be submitted through the DARPA BAA Website, per the instructions in Section IV.B.3, below. The classified portion must be provided separately, according to the instructions outlined in the 'Classified Submission Requirements and Procedures' section above.

c) **Disclosure of Information and Compliance with Safeguarding Covered Defense Information Controls**

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

DFARS 252.204-7000, "Disclosure of Information"
DFARS 252.204-7008, "Compliance with Safeguarding Covered Defense Information Controls"
DFARS 252.204-7012, "Safeguarding Covered Defense Information and Cyber Incident Reporting"

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

Compliance with the above requirements includes the mandate for proposers to implement the security requirements specified by National Institute of Standards and Technology (NIST) Special Publication (SP) 800-171, "Protecting Controlled Unclassified Information in Nonfederal Information Systems and Organizations" (see https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-171r2.pdf) and DoDI 8582.01 that are in effect at the time the solicitation is issued.

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

d) **Representations and Certifications**

In accordance with FAR 4.1102 and 4.1201, proposers requesting a procurement contract must complete electronic annual representations and certifications at https://www.sam.gov/.
In addition, all proposers are required to submit for all award instrument types supplementary DARPA-specific representations and certifications at the time of proposal submission. See http://www.darpa.mil/work-with-us/reps-certs for further information on required representation and certification depending on your requested award instrument.

e) **Human Subjects Research (HSR)/Animal Use**

Proposers that anticipate involving human subjects or animals in the proposed research must comply with the approval procedures detailed at http://www.darpa.mil/work-with-us/additional-baa, to include providing the information specified therein as required for proposal submission.

f) **Approved Cost Accounting System Documentation**

Proposers that do not have a Cost Accounting Standards (CAS) compliant accounting system considered adequate for determining accurate costs that are negotiating a cost-type procurement contract must complete an SF 1408. For more information on CAS compliance, see http://www.dcaa.mil. To facilitate this process, proposers should complete the SF 1408 found at

http://www.gsa.gov/portal/forms/download/115778 and submit the completed form with the proposal.

g) **Small Business Subcontracting Plan**

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

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

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

i) **Intellectual Property**

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

(1)   For Procurement Contracts

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

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

(2)   For All Non-Procurement Contracts

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

j) **System for Award Management (SAM) and Universal Identifier Requirements**

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

International entities can register in SAM by following the instructions in this link: https://www.fsd.gov/sys_attachment.do?sys_id=c08b64ab1b4434109ac5ddb6bc4bcbb8.

3.　　Submission Information

DARPA will acknowledge receipt of all submissions and assign an identifying control number that should be used in all further correspondence regarding the submission. DARPA intends to use electronic mail correspondence regarding HR001122S0015.

Submissions may not be submitted by mail, fax or e-mail; any so sent will be disregarded.

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

For full proposal submission dates, see Part I., Overview Information. Submissions received after these dates and times may not be reviewed.

The proposal must be received on or before, March 18, 2022 2:00 p.m. (Eastern Time), in order to be considered during the initial round of selections; however, proposals received after this deadline may be received and evaluated up to six months (180 days) from date of posting on the System for Award Management, Contract Opportunities (https://SAM.gov). Proposals submitted after the due date specified in the BAA or due date otherwise specified by DARPA may be selected. Proposers are warned that the likelihood of available funding is greatly reduced for proposals submitted after the initial closing date deadline.

a)　　Proposal Submission

(1) Submitting to the DARPA-approved Proposal Submissions Website

Unclassified full proposals sent in response to this BAA must be submitted via DARPA's BAA Website (https://baa.darpa.mil).

Note: If an account has already been created for the DARPA BAA Website, this account may be reused. If no account currently exists for the DARPA BAA Website, visit the website to complete the two-step registration process. Submitters will need to register for an Extranet account (via the form at the URL listed above) and wait for two separate e-mails containing a username and temporary password. After accessing the Extranet, submitters may then create an account for the DARPA BAA website (via the "Register your Organization" link along the left side of the homepage), view submission instructions and upload/finalize the proposal. Proposers

using the DARPA BAA Website may encounter heavy traffic on the submission deadline date; proposers should start this process as early as possible.

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

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

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

4. Funding Restrictions

Pre-award costs will not be reimbursed unless a pre-award cost agreement is negotiated prior to award.

5. Other Submission Requirements

DARPA will post a consolidated Frequently Asked Questions (FAQ) document. To access the posting go to: http://www.darpa.mil/work-with-us/opportunities. Under the HR001122S0015 summary will be a link to the FAQ. Submit your question/s by E-mail to HR001122S0015@darpa.mil. Questions must be received by the FAQ/Questions due date listed in Part I, Overview Information.

V. Application Review Information

A. Evaluation Criteria

Proposals will be evaluated using the following criteria, listed in descending order of importance:

1. Overall Scientific and Technical Merit

The proposed technical approach is innovative, feasible, achievable, and complete.

The proposed technical team has the expertise and experience to accomplish the proposed tasks. Task descriptions and associated technical elements provided are complete and in a logical sequence with all proposed deliverables clearly defined such that a final outcome that achieves the goal can be expected as a result of award. The proposal identifies major technical risks and planned mitigation efforts are clearly defined and feasible.

2. Potential Contribution and Relevance to the DARPA Mission

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

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

3. Cost and Schedule Realism

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

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

The proposed schedule aggressively pursues performance metrics in an efficient time frame that accurately accounts for the anticipated workload. The proposed schedule identifies and mitigates any potential schedule risk.

B. Review of Proposals

1. Review Process

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

DARPA will conduct a scientific/technical review of each conforming proposal. Conforming proposals comply with all requirements detailed in this solicitation; proposals that fail to do so may be deemed non-conforming and may be removed from consideration. Proposals will not be evaluated against each other since they are not submitted in accordance with a common work

statement. DARPA's intent is to review proposals as soon as possible after they arrive; however, proposals may be reviewed periodically for administrative reasons.

Award(s) will be made to proposers whose proposals are determined to be the most advantageous to the Government, consistent with instructions and evaluation criteria specified in the BAA herein and availability of funding.

2. Handling of Source Selection Information

DARPA policy is to treat all submissions as source selection information (see FAR 2.101 and 3.104) and to disclose their contents only for the purpose of evaluation. Restrictive notices notwithstanding, during the evaluation process, submissions may be handled by support contractors for administrative purposes and/or to assist with technical evaluation. All DARPA support contractors performing this role are expressly prohibited from performing DARPA-sponsored technical research and are bound by appropriate nondisclosure agreements. Subject to the restrictions set forth in FAR 37.203(d), input on technical aspects of the proposals may be solicited by DARPA from non-Government consultants/experts who are strictly bound by the appropriate non-disclosure requirements.

3. Federal Awardee Performance and Integrity Information (FAPIIS)

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

VI. Award Administration Information

A. Selection Notices and Notifications

1. Proposals

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

B. Administrative and National Policy Requirements

1. Meeting and Travel Requirements

There will be a program kickoff meeting and all key participants are required to attend. Performers should also anticipate regular program-wide PI Meetings and periodic site visits at the Program Manager's discretion.

2.   Solicitation Provisions and Award Clauses, Terms and Conditions

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

3.   Controlled Unclassified Information (CUI) and Controlled Technical Information (CTI) on Non-DoD Information Systems

Further information on Controlled Unclassified Information identification, marking, protecting and control, to include processing on Non-DoD Information Systems, is incorporated herein and can be found at http://www.darpa.mil/work-with-us/additional-baa.

C.   Reporting

The number and types of reports will be specified in the award document, but will include at a minimum monthly financial status reports. The reports shall be prepared and submitted in accordance with the procedures contained in the award document and mutually agreed on before award. Reports and briefing material will also be required as appropriate to document progress in accomplishing program metrics. A Final Report that summarizes the project and tasks will be required at the conclusion of the performance period for the award, notwithstanding the fact that the research may be continued under a follow-on vehicle.

D.   Electronic Systems

1.   Wide Area Work Flow (WAWF)

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

2.   i-Edison

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

E.   DARPA Embedded Entrepreneurship Initiative (EEI)

Awardees pursuant to this solicitation may be eligible to participate in the DARPA Embedded Entrepreneurship Initiative (EEI) during the award's period of performance. EEI is a limited scope program offered by DARPA, at DARPA's discretion, to a small subset of awardees. The goal of DARPA's EEI is to increase the likelihood that DARPA-funded technologies take root in the U.S. and provide new capabilities for national defense. EEI supports DARPA's mission "to make pivotal investments in breakthrough technologies and capabilities for national security" by accelerating the transition of innovations out of the lab and into new capabilities for the

Department of Defense (DoD). EEI investment supports development of a robust and deliberate Go-to-Market strategy for selling technology product to the government and commercial markets and positions DARPA awardees to attract U.S. investment. The following is for informational and planning purposes only and does not constitute solicitation of proposals to the EEI.

There are three elements to DARPA's EEI: (1) A Senior Commercialization Advisor (SCA) from DARPA who works with the Program Manager (PM) to examine the business case for the awardee's technology and uses commercial methodologies to identify steps toward achieving a successful transition of technology to the government and commercial markets; (2) Connections to potential industry and investor partners via EEI's Investor Working Groups; and (3) Additional funding on an awardee's contract for the awardee to hire an embedded entrepreneur to achieve specific milestones in a Go-to-Market strategy for transitioning the technology to products that serve both defense and commercial markets. This embedded entrepreneur's qualifications should include business experience within the target industries of interest, experience in commercializing early stage technology and the ability to communicate and interact with technical and non-technical stakeholders. Funding for EEI is typically no more than $250,000 per awardee over the duration of the award. An awardee may apportion EEI funding to hire more than one embedded entrepreneur, if achieving the milestones requires different expertise that can be obtained without exceeding the awardee's total EEI funding. The EEI effort is intended to be conducted concurrent with the research program without extending the period of performance.

EEI Application Process:

After receiving an award under the solicitation, awardees interested in being considered for EEI should notify their DARPA Program Manager (PM) during the period of performance. Timing of such notification should ideally allow sufficient time for DARPA and the awardee to review the awardee's initial transition plan, identify milestones to achieve under EEI, modify the award and conduct the work required to achieve such milestones within the original award period of performance. These steps may take 18-24 months to complete, depending on the technology. If the DARPA PM determines that EEI could be of benefit to transition the technology to product(s) the Government needs, the PM will refer the performer to DARPA Commercial Strategy.

DARPA Commercial Strategy will then contact the performer, assess fitness for EEI and in consultation with the DARPA technical office, determine whether to invite the performer to participate in the EEI. Factors that are considered in determining fitness for EEI include DoD/Government need for the technology; competitive approaches to enable a similar capability or product; risks and impact of the Government's being unable to access the technology from a sustainable source; Government and commercial markets for the technology; cost and affordability; manufacturability and scalability; supply chain requirements and barriers; regulatory requirements and timelines; Intellectual Property and Government Use Rights and available funding.

Invitation to participate in EEI is at the sole discretion of DARPA and subject to program balance and the availability of funding. EEI participants' awards may be subsequently modified bilaterally to amend the Statement of Work to add negotiated EEI tasks, provide funding and

specify a milestone schedule which will include measurable steps necessary to build, refine and execute a Go-to-Market technology transition plan aimed at delivering new capabilities for national defense. Milestone examples are available at: https://www.darpa.mil/work-with-us/contract-management

Awardees under this solicitation are eligible to be considered for participation in EEI, but selection for award under this solicitation does not imply or guarantee participation in EEI.

VII. Agency Contacts

For information concerning agency level protests see http://www.darpa.mil/work-with-us/additional-baa#NPRPAC.

Administrative, technical, or contractual questions should be sent via email to HR001122S0015@darpa.mil. All requests must include the name, email address and phone number of a point of contact.

Points of Contact:

The BAA Coordinator for this effort may be reached at:

HR001122S0015@darpa.mil.
DARPA/STO
ATTN: HR001122S0015
675 North Randolph Street
Arlington, VA 22203-2114

VIII. Other Information

Collaborative efforts/teaming are encouraged.

IX.   APPENDIX 1: PROPOSAL SLIDE SUMMARY

Organization Name Concept

Describe How It Works / Innovative Claims

Organization Name Contract/Proposal Specifics

☐ **Intellectual Property**
☐ **Data rights summary**
☐ **Deliverables**

X. APPENDIX 2: VOLUME 1 COVER SHEET TEMPLATE

Volume I, Technical and Management Proposal
Cover Sheet

(1) BAA Number: HR001122S0015

(2) Technical Area Four: Full Scale Aircraft

(3) Lead Organization Submitting Proposal: _____

(4) Type of Organization, selected among the following categories: "LARGE BUSINESS," "SMALL DISADVANTAGED BUSINESS," "OTHER SMALL BUSINESS," "HBCU," "MI," "OTHER EDUCATIONAL," OR "OTHER NONPROFIT"

(5) Other team members (if applicable) and type of organization for each:
        Company 1 (Other Small Business)
        Company 2 (Large Business)
        Company 3 (Large Business)
        University (Other Educational)

(6) Proposer's reference number (if any): _____

(7) Proposal Title:

(8) Technical point of contact:
        Salutation, last name first name
        Street Address
        Street Address 2
        City, State, Zip Code
        Telephone
        Fax (if available)
        Email (if available)

(9) Administrative point of contact:
        Salutation, last name first name
        Street Address
        Street Address 2
        City, State, Zip Code
        Telephone
        Fax (if available)
        Email (if available)

(10) Date proposal submitted:

XI. APPENDIX 3: PROPOSAL COST SLIDE SUMMARY

Organization Name Schedule/Cost

Base	**# Months**	**$##M**
Option 1	**## Months**	**$##M**
Option 2	**## Months**	**$##M**
Program Total	**## Months**	**$##M**

- **Proposed award type [i.e.** Cost Plus Fixed Fee (CPFF), Cost Plus Award Fee (CPAF), Cost Plus Incentive Fee (CPIF), Fixed Firm Price (FFP), etc.]

XII. APPENDIX 4: SECURITY CLASSIFICATION GUIDE (SCG) REQUEST FORM

All requests for SCGs must be submitted in the below form by email to HR001122S0015@darpa.mil. Requests for SCGs must be submitted by the deadline listed in Part IV.B.2.b. Security Information. Late submissions may not be accepted. All SCGs will be sent out in accordance with the classification level of the corresponding SCG. A facility clearance (FCL) at the Secret level is required to receive the Classified SCGs. Organizations with the appropriate clearance may request Classified SCGs by submitting the information in the below form. UNCLASSIFIED SCGs will be emailed to the UNCLASSIFIED email provided in the SCG request form.

HR001122S0015 SCG REQUEST FORM

Date:	
Company Name:	
Company Address (Unclassified):	
Company Address (Classified):	
Point of Contact (POC) Name:	
POC Phone Number:	
POC Email (Unclassified):	
POC Email (Classified):	
Company CAGE code:	
Security or FSO Phone Number:	
Security or FSO Email:	
Company Secure Fax number:	
Preferred Method of Receiving Classified SCGs:	