Air Force FY 2013 Rapid Innovation Fund

Broad Agency Announcement

Announcement Number: BAA-AFLCMC-2013-0001

Issue Date: 8 August 2013
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2-Step Broad Agency Announcement (BAA)
BAA-AFLCMC-2013-0001 Overview Information

To access hyperlinks from this electronic solicitation – hit CTRL and click on the hyperlink.

Federal Agency Name: Air Force Life Cycle Management Center Contracting Directorate (AFLCMC/PK)

Broad Agency Announcement Title: FY13 Air Force Defense Research and Development Rapid Innovation Fund (RIF) Program

Broad Agency Announcement Type: This is the initial announcement.

Broad Agency Announcement Number: BAA-AFLCMC-2013-0001

Catalog of Federal Domestic Assistance (CFDA) Number(s): 12.800_AF

THIS WILL BE A TWO-STEP SOLICITATION:

First Step: WHITE PAPER DUE DATE AND TIME: NLT 8 October 2013, 3:00 p.m. ET. Only white papers are due at this time. White papers must be received through the DoD RIF Submission Website (www.dodsbir.net/rif) NLT 3:00 p.m. ET, 8 October 2013. It will not be possible to submit white papers to the website after the due date/time. All white paper submissions must comply with the submission guidelines/templates provided on the website. Failure to comply may result in the rejection of the white paper during the administrative review. Offerors may provide only one concept per white paper submission. However, there is no limit to the number of white papers an individual offeror may submit.

Second Step: PROPOSAL DUE DATE AND TIME: On or about 20 December 2013, 3:00 p.m. ET. Proposals will only be accepted in response to requests for proposal sent to offerors with white papers determined to be technically acceptable as evaluated against criteria published in this BAA.

NOTE: White paper/proposal electronic receipt after the due date and time shall be governed by the provisions of FAR 52.215-1(c)(3). Early white paper/proposal submission is encouraged.

Solicitation Request: AFLCMC/PK is soliciting white papers for the effort described below. White papers shall be addressed to the listed Contracting point of contact (POC). This is an unrestricted solicitation. Small businesses are encouraged to propose on all or any part of this solicitation. The NAICS codes for this acquisition are 541711, Research and Development in Biotechnology, and 541712, Research and Development in the Physical, Engineering, and Life Sciences. The small business size standard is 500 employees. White papers/proposals submitted shall be in accordance with this announcement. There will be no other solicitation issued in regard to this requirement. Offerors should be alert for any BAA amendments potentially permitting extensions to the white paper submission date.
Amendments will be posted to one or more of the following web pages:


Although other web pages may repost these amendments, offerors are advised that only the FEDBIZOPPS web page is the official record.

**System for Award Management (SAM) Registration:** The General Service Administration (GSA) implemented Phase I of SAM on 29 July 2012. Phase I includes the functional capabilities of the retired Central Contractors Registration (CCR), Online Representations and Certifications Application (ORCA), and Excluded Parties List Systems (EPLS). To be eligible to receive an award, offerors must comply with FAR 52.204-99, System for Award Management Registration (August 2012) (DEVIATION). While this clause requires contractors to register in the SAM database prior to submitting an invoice under a Government contract, offerors are strongly encouraged to complete SAM registration prior to proposal submission. With regard to use of annual representations and certifications, offerors are strongly encouraged to complete SAM Representations and Certifications prior to proposal submission. If an offeror does not complete the SAM Representations and Certifications, they will be required to complete individual representations and certifications to be eligible for award. Contractors may obtain information on registration and annual confirmation requirements via the SAM accessed through https://www.acquisition.gov.

**Online Representations and Certifications Application (ORCA):** In accordance with FAR 4.1201, offerors must complete electronic annual representation and certifications at https://www.sam.gov/portal/public/SAM/.

**Excluded Parties List System (EPLS):** DoD uses EPLS to exclude recipients ineligible to receive Federal awards. EPLS can be accessed online at https://www.sam.gov/portal/public/SAM/.

**Type of Contract/Instrument:** Cost reimbursement (including cost share) or fixed price contracts, Cooperative Agreements, Technology Investment Agreements (TIAs), or other types of arrangements determined to be in the best interest of the Government.

**Estimated Program Cost:** Total program value is $45.0-65.0M; however, no individual award is anticipated to exceed $3M. The Government may provide additional funds to be used for new awards. There is no commitment by the Government for the total value of all awards to exceed $45.0-65.0M.

**Anticipated Number of Awards:** The Air Force anticipates selecting approximately 25 awards from this announcement.

**DCAA Approved Accounting System:** Offerors selected for a cost-type award must have a Defense Contract Audit Agency (DCAA) approved accounting system. Information concerning DCAA may be found at http://www.dcaa.mil. Also, specific information concerning accounting systems reviews may be found under the pull down menu located on the left hand side of the screen entitled "DCAA Publications". The publication listed there is entitled "Information for
Contractor's" and Chapter 2, paragraph 2-301.1, provides details on accounting system reviews. Offerors are strongly encouraged to address their accounting system prior to the award timeframe. Lack of a DCAA approved accounting system will delay and possibly prevent a cost-type or any other award. Questions regarding this matter shall be addressed to the Contracting POC identified below.

**Brief Program Summary:** The National Defense Appropriation Act (NDAA) for FY2011, Section 1073, provided the Department of Defense (DoD) with the authorities to facilitate the rapid insertion of innovative technologies into military systems or programs meeting critical national security needs. The FY2013 NDAA, Section 4201, includes funding to support these efforts. The Office of the Secretary of Defense (OSD) has established policy for implementing RIF. The Air Force Life Cycle Management Center (AFLCMC) will provide program management for execution of the FY13 AF RIF program.

This BAA describes Air Force implementation of RIF and complies with guidelines established by OSD.

Efforts awarded under this BAA should resolve operational challenges characterized by the national security areas of particular interest to the Air Force and Department of Defense found in Attachment 1.

This BAA is open to any technologies, products, or processes at the component, subsystem, or system level demonstrating near-term potential to address Air Force requirements or improve existing Air Force acquisition programs addressing specific areas outlined below.

**Address technical questions to:** Dwaine Young, AFLCMC/XZI, Air Force RIF Program Manager, 937-656-5152, Dwaine.young@wpafb.af.mil

**Address contracting questions to:** Tyler Printz, AFLCMC/PZIT, Air Force RIF Contracting Specialist, 937-656-5839, William.printz@us.af.mil
1. Program Description

This publication constitutes a Broad Agency Announcement (BAA) as contemplated in Federal Acquisition Regulation (FAR) Part 35.016 and FAR 6.102(d)(2). Air Force Life Cycle Management Center Directorate (AFLCMC/PK) reserves the right to fund all, some or none of the proposals in response to this announcement. White papers, technical and cost or price proposals (or any other material) submitted in response to this BAA will not be returned.

AFLCMC/PK is soliciting white papers for the FY13 Rapid Innovation Fund (RIF) Program. Proposal invitation will be determined based on evaluation of white papers using the criteria published in this BAA.

The National Defense Appropriation Act (NDAA) for FY2011, Section 1073, provided the Department of Defense (DoD) with the authorities to facilitate the rapid insertion of innovative technologies into military systems or programs meeting critical national security needs. The FY2013 NDAA, Section 4201, includes funding to support these efforts. The Office of the Secretary of Defense (OSD) has established policy for implementing RIF. AFLCMC will provide program management for execution of the FY13 AF RIF program.

This BAA describes Air Force implementation of RIF and complies with guidelines established by OSD. It is primarily for the identification and further development of technologies with potential for rapid transition developed by small businesses, although it is not a total small business set-aside.

1.1. Research Opportunity Description

Enacted by Congress in the 2011 National Defense Authorization Act (NDAA) as the Rapid Innovation Program, the NDAA, Section 4201, Public Law 112-84, and the "Consolidated and Further Continuing Appropriations Act", 2013 provides DoD with the authority to fund programs that facilitate the rapid insertion of innovative technologies into military systems or programs that meet critical national security needs.

This BAA is primarily for the validation and transition of technologies developed by small businesses, including those resulting from the Small Business Innovation Research (SBIR) program and DoD reimbursed Independent Research and Development (IR&D). IR&D does not include R&D performed under a grant or contract from the Government. IR&D is defined in Federal Acquisition Regulation (FAR) 31.205-18(a).

The goals of the RIF reflect DoD’s emphasis on rapid, responsive acquisition and the engagement of small, innovative businesses in solving defense needs. The Department’s goals for the RIF are to resolve operational challenges or other critical national security needs and to stimulate and transition for innovative technology, primarily from small businesses (including Small Business Innovation Research (SBIR) Phase II projects), that resolve operational challenges or other
critical national security needs.

Technology maturity will be identified to assess technical risks for candidate proposals in direct support of major defense acquisition programs, programs of record, or the next phase of research and development. For purposes of this BAA, DoD seeks a Technology Readiness Level (TRL) between 6 and 9. In circumstances of exceptional technical merit, proposals with a lower TRL rating will be considered for award, as warranted by the Source Selection Authority.

1.2. Deliverable Items

1.2.1. Data Items

Technical data to be delivered will include, but is not limited to:

(a) Scientific and Technical Reports, Final Report – DI-MISC-80711A/T
(b) Funds and Man-hour Expenditure Report – DI-FNCL-80331A/T
(c) Contract Funds Status Report (CFSR) – DI-MGMT-81468/T (cost-type contracts)
(d) Status Report – DI-MGMT-80368A/T
(e) Presentation Material – DI-ADMN-81373/T

1.2.2. Software

As proposed, to be delivered on either CD-R or CD-ROM.

1.2.3. Hardware

As proposed

1.3. Schedule

1.3.1. BAA Schedule

<table>
<thead>
<tr>
<th>Event</th>
<th>Date &amp; Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAA is released</td>
<td>8 Aug 2013</td>
</tr>
<tr>
<td>Website Open for White Paper Submission</td>
<td>8 Aug 2013</td>
</tr>
<tr>
<td>BAA Closes for White Papers</td>
<td>8 Oct 2013 at 3:00 PM ET</td>
</tr>
<tr>
<td>Invitations for Proposal</td>
<td>On or about 20 Nov 2013</td>
</tr>
<tr>
<td>Full Proposals Due</td>
<td>On or about 20 Dec 2013 at 3:00 PM ET</td>
</tr>
<tr>
<td>Notification of Selection for Awards</td>
<td>On or about 24 Feb 2014 – 30 Sep 2014</td>
</tr>
<tr>
<td>Contract Awards</td>
<td>On or about 24 Feb 2014 – 30 Sep 2014</td>
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*These dates are estimates as of the date of this announcement and are subject to change.
1.3.2. Award Schedule

Technical approach must be completed within 24 months of contract award, including 21 months technical effort and 3 months for preparation/submission of the final technical report. Technology should be capable of fielding within 36 months of contract award. However, efforts beyond the 24 month period of performance will not be funded through the Air Force RIF Program.

1.4. Other Requirements

1.4.1. Program Security Classification

Unclassified, although access to classified information or facilities may be required.

1.4.2. Export Control

Information involved in these efforts will be subject to export control (International Traffic in Arms Regulations (ITAR) 22 CFR 120-131, or Export Administration Regulations (EAR) 15 CFR 710-774). A certified DD2345, Militarily Critical Technical Data Agreement, must be submitted with the proposal, if invited. Information on the DD2345 can be found at http://www.dlis.dla.mil/JCP#. The estimated timeframe to obtain a Certified DD2345 is approximately 2-3 weeks. Note: a certified DD2345 may also be required to access additional information on thrust areas.

1.4.3. Export Controlled Items

As prescribed by DFARS 204.7303, DFARS 252.204-7008, Export Controlled Item (Apr 2010), is contained in this solicitation, as shown below. This clause shall be contained in all resulting contracts.

**DFARS 252.204-7008, Export-Controlled Items (APR 2010)**

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

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

(b) The Contractor shall comply with all applicable laws and regulations regarding export-controlled items, including, but not limited to, the requirement for contractors to register with the Department of State in accordance with the ITAR. The Contractor shall consult with the Department of State regarding any questions relating to compliance with the ITAR and shall consult with the Department of Commerce regarding any questions relating to compliance with the EAR.
(c) The Contractor's responsibility to comply with all applicable laws and regulations regarding export-controlled items exists independent of, and is not established or limited by, the information provided by this clause.
(d) Nothing in the terms of this contract adds, changes, supersedes, or waives any of the requirements of applicable Federal laws, Executive orders, and regulations, including but not limited to—
   (1) The Export Administration Act of 1979, as amended (50 U.S.C. App.2401, et seq.);
   (2) The Arms Export Control Act (22 U.S.C. 2751, et seq.);
   (4) The Export Administration Regulations (15 CFR Parts 730-774);
   (5) The International Traffic in Arms Regulations (22 CFR Parts 120-130); and
   (6) Executive Order 13222, as extended;
(e) The Contractor shall include the substance of this clause, including this paragraph (e), in all subcontracts.

(End of clause)

1.5. Data Rights Desired

1.5.1. Technical Data

Unlimited Rights

1.5.2. Non-Commercial Software (NCS)

Unlimited Rights

1.5.3. NCS Documentation

Unlimited Rights

1.5.4. Commercial Computer Software Rights

Customary License

Rights in technical data and NCS developed or delivered under this contract are of significant concern to the Government. The Government will therefore carefully consider any restrictions on the use of technical data, NCS, and NCS documentation which could result in transition difficulty or less-than full and open competition for subsequent development of this technology. Additionally, data rights as stated in SBIR policy may be invoked for the RIF program as follows:

The potential for inclusion of SBIR or data rights other than unlimited on awards is recognized. IAW the Small Business Administration (SBA) SBIR Policy Directive, Section 8(b), SBIR data rights clauses are non-negotiable and must not be the subject of negotiations pertaining to an award, or diminished or removed during award
administration. Issuance of an award will not be made conditional based on forfeit of data rights. If the SBIR awardee wishes to transfer its SBIR data rights to the Air Force or to a third party, it must do so in writing under a separate agreement. A decision by the awardee to relinquish, transfer, or modify in any way its SBIR data rights must be made without pressure or coercion by the agency or any other party. Non-SBIR data rights less than unlimited will be evaluated and negotiated on a case-by-case basis. Government Purpose Rights are anticipated for data developed with DoD–reimbursed IR&D funding.

In exchange for paying for development of the data, the Government expects technical data, NCS, and NCS documentation developed entirely at Government expense to be delivered with Unlimited Rights unless otherwise negotiated or mandated by statute, i.e., SBIR data rights.

Technical data, NCS, and NCS documentation developed with mixed funding are expected to be delivered with at least Government Purpose Rights. Offerors proposing delivery of technical data, NCS, or NCS documentation subject to Government Purpose Rights shall fully explain what technical data, NCS, or NCS documentation developed with costs charged to indirect cost pools and/or costs not allocated to a Government contract will be incorporated, how the incorporation will benefit the program, and address whether those portions or processes are segregable. The Government expects delivery of technical data, NCS, and NCS documentation subject to Government Purpose Rights will fully meet program needs. Offerors proposing less than Government Purpose License Rights will identify in their proposals the cost to the Government to obtain said rights.

Offers that propose delivery of technical data, NCS, or NCS documentation subject to Limited Rights, Restricted Rights, or Specifically Negotiated License Rights will be considered. Proposals shall fully explain what technical data, NCS, or NCS documentation developed with costs charged to indirect cost pools and/or costs not allocated to a government contract will be incorporated and how the incorporation will benefit the program.

Offerors are reminded that the Identification and Assertion of Restrictions on the Government’s Use, Release, or Disclosure of Technical Data or Computer Software, required under DFARS 252.227-7013 and DFARS 252.227-7014, is included in Section K and due at time of proposals. Assertions must be completed with specificity with regard to each item, component, or process listed. Nonconforming assertions lists will be rejected.

Note that DFARS 252.227-7014(d) describes requirements for incorporation of third party computer software (commercial and non-commercial). Any commercial software to be incorporated into a deliverable must be clearly identified in the proposal. Because many commercial software licenses are not transferrable or may not be acceptable to the Government, commercial software licenses proposed for delivery to the Government must be approved by the contracting officer prior to award.

As used in this subparagraph, the terms Unlimited Rights, Government Purpose Rights, Specifically Negotiated License Rights, and Limited Rights in technical data are as
defined in DFARS 252.227-7013. The terms Unlimited Rights, Government Purpose Rights, Specifically Negotiated License Rights, and Restricted Rights in noncommercial computer software and noncommercial software documentation are as defined in DFARS 252.227-7014. The term Commercial Computer Software is as defined in DFARS 252.227-7014.

1.6. Nuclear Weapons Related Material (NWRM)

Proposed efforts may require management, delivery, or use of Nuclear Weapons Related Material (NWRM). Therefore, AFFARS clause 5352.223-9003, Enhanced Security of Products, is hereby incorporated by reference. If the effort proposed requires NWRM, the offeror will include the appropriate security information as provided by the vendor(s).

2. Award Information

2.1. Anticipated Invitation/Award Dates

Invitation for proposal resulting from white paper evaluation is anticipated on or about 20 Nov 2013. All other notifications will also be made that date. Contract awards are anticipated to be complete by Sep 2014.

2.2. Anticipated Funding (Overall program, not per contract)

FY13- $45.0-65.0M. This funding profile is an estimate only and not a contractual obligation, as all funding is subject to change due to Government discretion and availability.

2.3. Number of Awards Anticipated

The Air Force anticipates awarding approximately 25 awards.

3. Eligibility Information

3.1. Eligible Offeror

This is an unrestricted solicitation. Small businesses are encouraged to propose on all or any part of this solicitation. All responsible sources capable of satisfying the Government's needs may submit a white paper under this BAA. Historically Black Colleges and Universities (HBCUs) and Minority Institutions (MIs) are encouraged to submit white papers and join others in submitting white papers; however, no portion of this announcement will be set aside for HBCU and MI participation.

3.2. Cost Sharing or Matching

Cost share is encouraged but not required. Provision of cost share will not be used as evaluation criteria. Fee is not allowed on the cost share portion of contracts.
3.3. DCAA Approved Accounting System

Offerors selected for a cost-type award must have a Defense Contract Audit Agency (DCAA) approved accounting system. Information concerning DCAA may be found at http://www.dcaa.mil. Also, specific information concerning accounting systems reviews may be found under the pull down menu located on the left hand side of the screen entitled "DCAA Publications". The publication listed there is entitled “Information for Contractor's" and Chapter 2, paragraph 2-301.1, provides details on accounting system reviews. Offerors are strongly encouraged to address their accounting system prior to the award timeframe. Lack of a DCAA approved accounting system will delay and possibly prevent a cost-type or any other award. Questions regarding this matter shall be addressed to the Contracting POC identified below.

3.4. Federally Funded Research and Development Centers (FFRDCs):

Federally Funded Research and Development Centers (FFRDCs), including Department of Energy National Laboratories, are not eligible to receive awards under this BAA. However, teaming arrangements between FFRDCs and eligible principal bidders are allowed to the extent that such an arrangement is permitted under the sponsoring agreement between the Government and the FFRDC.

3.5. Foreign Participation

Prohibited at the prime contractor level. This acquisition involves data that are subject to export control laws and regulations. Only contractors who are registered and certified with the Defense Logistics Services Center (DLSC) and have a legitimate business purpose may participate in this solicitation. Contact the Defense Logistics Services Center, 74 Washington Avenue N., Battle Creek, Michigan 40917-3084 (1-800-352-3572) for further information on the certification process. Offerors must submit a copy of an approved DD2345, Militarily Critical Technical Data Agreement, with proposals. Information on the DD2345 can be found at http://www.dlis.dla.mil/JCP/#. The estimated timeframe to obtain a Certified DD2345 is approximately 2-3 weeks.

3.6. Department of Defense Laboratories

Department of Defense laboratories are not eligible to receive awards under this BAA and shall not submit white papers in response to this BAA. As with FFRDCs, these organizations may team with responsible sources from academia and industry that are submitting proposals under this BAA.

3.7. University Affiliated Research Centers (UARCs)

University Affiliated Research Centers are eligible to submit proposals under this BAA unless precluded from doing so by their Department of Defense UARC contracts.
4. White Paper/Proposal Preparation Instructions

4.1. Application Package

This BAA consists of a two-step process described in detail below. White papers/proposals submitted shall be in accordance with this announcement. *There will be no other solicitation issued in regard to this requirement.* **ONLY WHITE PAPERS ARE SOLICITED AT THIS TIME.** Offerors should be alert for any BAA amendments permitting extension to the white paper submission date.

4.2. First Step (White Paper) Instructions

4.2.1. General

The *FIRST STEP* requests a white paper, including an estimate of cost, addressing one of the need areas list in Attachment 1. **White papers are due NLT 8 October 2013, 3:00 PM ET.** The white paper package shall include a discussion of the nature and scope of the specific product/technology and its proposed capabilities. Offerors may provide only one concept per white paper submission. However, there is no limit to the number of white papers an individual offeror may submit. The Government will evaluate the white papers in accordance with the FIRST STEP – White Paper Evaluation Criteria, set forth in Section 8.1 below. Offerors will be notified of the disposition of their white paper via email. Requests for proposal will be sent to offerors with white papers determined to be technically acceptable as evaluated against criteria published in this BAA. Proposals will only be accepted in response to a Government request for proposal. The cost of preparing white papers in response to this solicitation is not considered an allowable direct charge to any resulting or any other contract; however, it may be an allowable expense to a normal B&P indirect cost as specified in FAR 31.205-18.

4.2.2. Format of White Papers

4.2.2.1. Number of Pages

The white paper shall be limited to 3 pages, prepared in Word format and submitted as a searchable Portable Document Format (PDF) format. The white paper cover page and quad chart are not included in the page limit. Pages shall be numbered starting with the system-generated cover page as 1, the body of the white paper as pages 2-4, and the quad chart as page 5. The page limitation covers all information including indices, photographs, tables, charts, appendices, attachments, etc. The Government will not consider pages in excess of these limitations. Offerors shall submit white papers via the DoD Submission Site. See Section 4.4 for submission instructions.

4.2.2.2. Text & Font Format

Font shall be standard 10-point business font *Times New Roman*. Character spacing must be “normal,” not condensed in any manner. Pages shall be single-spaced,
4.2.2.3. Technical

The white paper body shall include a discussion of the nature and scope of the technology and the offeror’s proposed technical approach/solution, including measures of success and an anticipated risk mitigation plan. It may also include any proposed deliverables. Resumes and Statements of Work (SOW) are not requested at this time.

4.2.2.4. Cost

The white paper shall include a cost estimate only. No detailed cost or pricing support information shall be forwarded. Only a time-phased bottom line figure should be provided.

4.2.2.5. Other Information

Perform a virus check before uploading the white paper. If a virus is detected, it may cause rejection of the file. If the offeror wishes to restrict its white papers, papers must be marked with the language stated in FAR 15.609(a) and (b).

4.2.2.6. White Paper/Proposal Content Summary

Offerors may be ineligible for award if all requirements of this solicitation are not met by the white paper/proposal due date. Reference Section 10.12, White Paper/Proposal Content Checklist, for a checklist of the requirements.

4.3. Content of White Papers

A complete white paper submission will consist of three volumes. The cover sheet is Volume One, the white paper is Volume Two, and the quad chart is Volume Three.

4.3.1. Volume One – Cover Sheet (Online Forum)

The cover sheet shall be prepared on the DoD RIF submission website. Once the cover sheet is saved, the system will assign you a unique white paper number. The cover sheet must be prepared before Volume Two and Volume Three can be uploaded. Offerors shall complete the following information as part of the required online cover sheet form:
- White Paper Title
- Firm information: Name, mailing address, DUNS code, CAGE code, Tax ID number, and website, if applicable
- Duration of effort
- Estimated cost of effort
- Self-certification of applicant e.g., small business, large business, academic institution, FFRDC, defense laboratory, other
- Identify prior business relationships with the Department of Defense
- Select the Air Force need and/or FY13 NDAA thrust area addressed by the proposed technology
- Identify up to three platforms/programs/components to which the proposed technology/product could apply
- Does the proposed approach derive from, extend, or logically conclude efforts from prior DoD-funded SBIR or STTR projects (select yes/no)?
  - If yes, provide the SBIR/STTR topic number, resulting contract number, and specify Phase I, II, or III
- What is the current Technology Readiness Level (TRL) of the proposed effort/technology?
- How was validation of this TRL accomplished?
- What is the projected end TRL?
- Does this effort have a validated transition path into a current Air Force program or to a component being supplied to a current or emerging Air Force program?
  - List the current Air Force program or to a component being supplied to a current or emerging Air Force program.
- Has this approach been proposed to or funded by the DoD or another Federal Agency (select yes/no)?
  - If yes, provide the agency, solicitation, and contract/grant number
- Do you have any Statement Of Work relationships with existing federally funded tasks such as SBIR, CPP, IRAD, etc.?  
  - If yes, provide the agency and contract/grant number
- Are you proposing to use foreign citizens for work under the proposed effort (select yes/no)?
- Provide the estimated percentage of effort to be performed by the offeror and by other team members, e.g. subcontractors/consultants:
  - Offeror: _____%  
  - Team members: _____%
- Team Members Certification of Applicant:
  - Small Business
  - Large Business
  - Academic Institutions
  - FFRDC
  - Defense Laboratories
  - Non Profit
  - Other
- Identify the preferred funding instrument type: select contract, cooperative agreement, or other transaction
• Provide a technical POC name, phone number, and email address
• Provide a business POC name, phone number, and email address
• Provide a technical abstract (not to exceed 200 words) to describe the effort
• Provide a top-level (25 words or less) description of the proposed technology’s relevance to the stated need(s)

4.3.2. Volume Two – White Paper (3-page PDF file upload)

The white paper shall be prepared outside of the DoD RIF submission website and then uploaded to the submission site as a PDF attachment. The decision to request a proposal will be based upon the white paper submission. Ensure your white paper adequately describes the proposed approach and resulting contributions. The white paper shall include the following sections in the order given below, as applicable:

(1) Contribution to the Requirement: Provide a high-level project overview describing:

• How and to what degree the technical approach addresses the operational challenge area and/or an acquisition program need:
  o Enhanced Military Capability – Describe how your proposed project significantly increases or improves the military capabilities in relationship to operational challenge areas, or acquisition programs.
  o Accelerated Military Development Capability – Describe how your proposed project accelerates the development and ability to deploy military capabilities required for use by the Department of the Defense.
  o Acquisition Development Cost Reduction – Describe how your proposed project reduces the acquisition development and total ownership costs of the identified defense program or components.
  o Fielded Systems Sustainment Cost Reduction – Describe how your proposed project reduces the sustainment costs of the identified fielded system or acquisition program.
• The current Technology Readiness Level (TRL) of the technology and/or product and how it will transition to military systems or programs. See DoD Deskbook 5000 2-R for TRL definitions ([https://acc.dau.mil/CommunityBrowser.aspx?id=23170](https://acc.dau.mil/CommunityBrowser.aspx?id=23170)).

(2) Technical Approach: Describe how the proposed technical approach is innovative, feasible, achievable, complete, and supported by a technical team that has the expertise and experience to accomplish the proposed tasks, including:

• Project objectives and scope.
• Overview of tasks and methods planned to achieve each objective and the final product to be delivered.
• Key Personnel (including subcontractors and consultants).
• Facilities/Equipment necessary to carry out the proposed effort.
• Related Prior or Current Work, including SBIR/STTR contracts and IR&D
(3) **Schedule:** Describe how the proposed schedule is achievable for the proposed technical approach. Transition to military systems or programs is expected within 36 months of award (however, efforts beyond the 24 month period of performance will not be funded through the Air Force RIF Program). Discuss:

- Major activities/milestones.
- Deliverables.
- Metrics/measures of success.
- Potential risks and risk mitigation plans.

(4) **Costs:** Describe the estimated costs for the proposed technical approach.

### 4.3.3. Volume Three – Quad Chart (1-page PDF file upload)

The unclassified quad chart shall be prepared outside of the DoD RIF submission website in portrait orientation and then uploaded to the submission site as a PDF attachment. A fully functional (editable) quad chart template can be found on the DoD RIF submission website ([www.dodsbir.net/rif](http://www.dodsbir.net/rif)) and shall include the following information:

- **Heading (Arial 24pt Bold)**
  - Title of Project
  - Company Name
  - Requirement Number/Title

- **Upper Left Quadrant:**
  - Picture or graphic illustrating proposed technology development

- **Lower Left Quadrant** (Arial 12pt Normal):
  - Project objectives and scope
  - Key deliverables (data, hardware, software, and other)
  - Key Subcontractors
  - Facilities/Equipment Required
  - Related Prior or Current Work

- **Upper Right Quadrant** (Arial 12pt Normal):
  - Brief technology description in non-technical/plain English
  - Technical Readiness Level (current level and anticipated level at project completion)
  - Critical need or NDAA thrust area addressed
  - Specific outcomes benefitting the Warfighter
  - Once developed, where it will be used
  - How the technology will transition to a current Air Force program or to a component being supplied to a current or emerging Air Force program

- **Lower Right Quadrant:** (Arial 12pt Normal):
  - Estimated cost
  - Notional Project Schedule Milestone (can be a simplified GANNT chart)
  - Metrics/Measures of Success
4.4. White Paper Submission Instructions:

Offerors must be registered on the DoD RIF Submission Website at (www.dodsbir.net/rif) to submit white papers. Once registered, the AF RIF BAA option must be chosen. White papers sent by any other means, e.g., hand-carried, postal service mail, commercial carrier, fax, or email, will not be considered. Offerors intending to submit multiple white papers must generate a separate cover sheet for each. A complete white paper package submission consists of three volumes; the cover sheet is Volume One, the white paper is Volume Two, and the quad chart is Volume Three.

Offerors are responsible for ensuring compliant and final submission of white papers. Detailed submission instructions are available on the website.

White papers may be uploaded as often as necessary, each time overwriting the file previously submitted. Once a file is overwritten, the previous version is NOT retrievable. Offerors electing to modify white papers in any way must allow enough time to upload a complete updated paper. Failure to provide a complete modification by the solicitation closing will render the offeror’s white paper “late” regardless of whether the offeror had previously submitted a white paper.

4.4.1. Notification of White Paper Receipt

White papers will be considered “works in progress” and will not be accepted for evaluation until the offeror submits the final white paper package. The DoD RIF submission website will provide offerors a printable confirmation of successful white paper submission upon upload completion.

4.4.2. Submission of Late Proposals (Applicable to White Papers and Proposals)

Offerors are responsible for creating an account in the DoD RIF submission website and submitting electronic white papers/proposals to be received no later than the date and time specified in Section 1.3.1 above. When sending electronic files, the offeror shall account for potential delays in file transfer from the originator’s computer server to the Government website/computer server. Offerors are encouraged to submit early to avoid potential file transfer delays due to high demand or problems encountered in the course of the submission.

Acceptable evidence to establish the time of receipt includes electronic evidence of receipt. Offerors should print and maintain for their records the electronic date/time stamped receipt appearing on the final screen following each submission. All submissions shall be fully uploaded before the cut off time/date in order to be considered. There will be no exceptions.

Any white paper, proposal, modification, or revision received at the DoD RIF submission website after the exact time specified for receipt of offers is “late” and will not be considered.
If an emergency/unanticipated event interrupts normal Government processes and white papers and/or proposals cannot be received at the designated site by the date/time specified, the receipt date/time will be extended to the same time on the first work day on which normal Government processes resume.

White papers may be withdrawn any time before invitation for proposal and proposals withdrawn any time before award by written notice to the Contracting Officer. Withdrawals are effective upon receipt of notice by the Contracting Officer.

Do not lock or encrypt any files uploaded as part of the white paper submission. White papers shall remain valid for 180 days from the submission date.

4.5. Second Step (Proposal) Instructions

4.5.1. General

The SECOND STEP consists of offerors submitting a technical and cost proposal in response to an invitation from the Government. **It is anticipated proposals will be due on or about 20 December 2013, 3:00 PM ET. Specific due date and time will be included in the proposal invitation.** After receipt, proposals will be evaluated in accordance with the award criteria in Section 8.2 below. Proposals will be categorized and subsequently selected for negotiations. Offerors shall apply the restrictive notice prescribed in the provision of FAR 52.215-1(e) Instructions to Offerors — Competitive Acquisition. Offerors should consider proposal instructions contained in the Broad Agency Announcement (BAA) Guide for Industry, [http://www.wpafb.af.mil/library/factsheets/factsheet.asp?id=9218](http://www.wpafb.af.mil/library/factsheets/factsheet.asp?id=9218). This guide is specifically designed to assist offerors’ understanding of the BAA proposal process. Technical and cost volumes shall be submitted in separate searchable PDF files, and must be valid for 180 days. Proposals must reference the announcement number, BAA-AFLCMC-2013-0001. Offerors are advised only properly warranted Government Contracting Officers are legally authorized to contractually bind or otherwise commit the Government. The cost of preparing white papers in response to this solicitation is not considered an allowable direct charge to any resulting or any other contract; however, it may be an allowable expense to a normal B&P indirect cost as specified in FAR 31.205-18.

4.5.2. Format of Proposals

4.5.2.1. Number of Pages

The following describes the page limitations on the proposal submittal:

(a) Technical proposals shall be limited to 25 pages, prepared in Word format and submitted as a PDF file in the DoD RIF Submission Website.

(b) Pages shall be numbered starting with the cover page as Page 1, generated by the submission system. The page limitation covers all information including indices, photographs, tables, charts, appendices, attachments, statements of
capability, including experience and requisite skills, for key personnel, if desired, etc.  
(c) The proposal page limit does not include the offeror’s proposed Statement of Work (SOW), which is a separate document. However, the same formatting rules apply to the SOW, which is limited to 12 pages.

Due to continuing attempts by numerous offerors to obtain an unfair advantage by failing to conform to the formatting rules above, the Government will check the technical proposal and SOW for conformance to the stated requirements. Any pages in excess of the stated page limitation after the format check will not be considered. In addition, if the technical proposal or SOW does not conform to the above requirements, a notification will be sent to the offeror’s company management to advise of the nonconformance.

4.5.2.2. Text & Font Format

The following describes the text and font format on the proposal submittal:

(a) Font shall be standard 10-point business font Times New Roman.
(b) Character spacing must be “normal,” not condensed in any manner.
(c) Pages shall be single-spaced, single-sided, 8.5 X 11 inches, with at least one-inch margins on sides, top, and bottom. Lines between text lines must also be 10-point.
(d) All text, including text in tables and charts, must adhere to all font size and line spacing requirements listed herein. Graphical presentations, including tables, while not subject to the same font size and spacing requirements shall be easily readable. This exception shall not be used to circumvent formatting requirements and page count limitations by including lengthy narratives in such items.

4.5.3. Volume One – Cover Sheet

The cover sheet shall be prepared on the DoD RIF submission website. Once the cover sheet is saved, the system will assign you a unique proposal number. The cover sheet must be prepared before Volume Two, Volume Three, and Volume Four can be uploaded. Offerors shall complete the following information as part of the required online cover sheet form:

- White Paper Title
- Firm information: Name, mailing address, DUNS code, CAGE code, Tax ID number, and website, if applicable
- Duration of effort
- Estimated cost of effort
- Self-certification of applicant e.g., small business, large business, academic institution, FFRDC, defense laboratory, other
- Identify prior business relationships with the Department of Defense
Select the Air Force need and/or FY13 NDAA thrust area addressed by the proposed technology
Identify up to three platforms/programs/components to which the proposed technology/product could apply
Does the proposed approach derive from, extend, or logically conclude efforts from prior DoD-funded SBIR or STTR projects (select yes/no)?
  - If yes, provide the SBIR/STTR topic number, resulting contract number, and specify Phase I, II, or III
What is the current Technology Readiness Level (TRL) of the proposed effort/technology?
How was validation of this TRL accomplished?
What is the projected end TRL?
Does this effort have a validated transition path into a current Air Force program or to a component being supplied to a current or emerging Air Force program?
  - List the current Air Force program or to a component being supplied to a current or emerging Air Force program.
Has this approach been proposed to or funded by the DoD or another Federal Agency (select yes/no)?
  - If yes, provide the agency, solicitation, and contract/grant number
Do you have any Statement Of Work relationships with existing federally funded tasks such as SBIR, CRP, IRAD, etc.?
  - If yes, provide the agency and contract/grant number
Are you proposing to use foreign citizens for work under the proposed effort (select yes/no)?
Provide the estimated percentage of effort to be performed by the offeror and by other team members, e.g. subcontractors/consultants:
  - Offeror: _____%
  - Team members: _____%
Team Members Certification of Applicant:
  - Small Business
  - Large Business
  - Academic Institutions
  - FFRDC
  - Defense Laboratories
  - Non Profit
  - Other
Identify the preferred funding instrument type: select contract, cooperative agreement, or other transaction
Provide a technical POC name, phone number, and email address
Provide a business POC name, phone number, and email address
Provide a technical abstract (not to exceed 200 words) to describe the effort
Provide a top-level (25 words or less) description of the proposed technology’s relevance to the stated need(s)
4.5.4. Volume Two - Technical Proposal

The proposal shall include a discussion of the nature and scope of the specific product/technology and its proposed capabilities, as well as metrics to determine the effectiveness of the actual technical approach versus stated goals. Additional information on prior work in this area, descriptions of available equipment, data and facilities and, if desired, statements of capability, including experience and requisite skills, for key personnel participating in this effort shall also be included as attachments to the technical proposal. If Government Furnished Property is requested, submit the following information:

(a) A list or description of all Government property the offeror or its subcontractors propose to use on a rent-free basis. The list shall identify the accountable contract under which the property is held and the authorization for its use (from the Contracting Officer having cognizance of the property);
(b) The dates during which the property will be available for use and, for any property to be used concurrently in performing two or more contracts, the amounts of the respective uses in sufficient detail to support prorating the rent;
(c) The amount of rent to otherwise be charged IAW FAR 52.245-9, Use and Charges; and;
(d) Voluntary consensus standard/industry leading practices/ standards to be used to manage Government property, or existing property management plans or procedures to account for property.

Note: Any questions concerning the technical proposal preparation shall be referred to the Technical POC cited in Section 10.6.

4.5.5. Volume Three - Cost/Business Section

(a) Separate the volume into a business section and cost section. The business section shall contain all business aspects of the proposed instrument, e.g., type of contractual instrument and information not technically related such as certifications and representations, data rights, subcontracting plans (see below), identification of pass-through charges, subcontract analysis IAW FAR 15.404-3(b), etc. Cost proposals have no page limitations. However, offerors are requested to keep cost proposals to 40 pages or less as a goal. The proposal shall be furnished with supporting schedules and contain a person hour breakdown per task. If selected for award, offerors should be prepared, upon requested, to provide formulas used to accomplish spreadsheets submitted as part of the cost proposal to contracting personnel. Offerors with valid, current Forward Pricing Rate Agreements (FPRAs) or Forward Pricing Rate Recommendations (FPRRs) shall submit a copy with the proposal or provide a link where it can be found. Offerors claiming DoD-reimbursed IR&D efforts shall provide verification in the form of DCMA documentation. Refer to the BAA Guide for Industry for detailed proposal instructions.
(b) Subcontracting plans, for efforts anticipated to exceed $650,000, shall be submitted with the technical and cost proposals. Reference FAR 19.704, DFARS 219.704, and AFFARS 5319.704(a)(1) for subcontracting plan requirements. Small business concerns are exempt from this requirement.
4.5.6. Volume Four - Statement of Work

This volume shall include a SOW detailing the technical tasks to be accomplished under the proposed effort. The SOW should clearly detail the scope and objectives of the effort, tasks to be completed, technical approach, and deliverables. It is anticipated the proposed SOW will be incorporated as an attachment to the resulting award, if selected. Therefore, **do not include any proprietary information in the SOW.** Refer to The BAA Guide for Industry to assist in SOW preparation. *It is not mandatory to follow formatting information included in the guide.* Questions may be addressed to the Technical POC cited in Section 10.6.

**Note: Section 4.5 “Second Step (Proposal), Instructions” applies to assistance AND contract proposals.**

If you intend to propose an assistance instrument, go to Section 5 for instructions to find the assistance opportunity, prepare the cover page, complete the required certification, and submit proposals electronically. If you intend to propose a contract, go to Section 6 for proposal submission instructions. This information ONLY applies if invited to submit a proposal based on the white paper evaluation process.

5. Proposal Submission for Assistance Instruments

5.1. Assistance Opportunity


5.2. Proposal Cover Page – SF 424 (R&R) Form

All proposals for assistance must include an SF 424 (R&R) as the cover page. The SF 424 (R&R) shall be downloaded from the “Application” box in the upper right hand corner of the synopsis page. Click on “download” under the column “Instructions and Application”. Select “Download Application Package” and complete the SF 424 (R & R).

5.3. Certifications

To access the required certifications, select the “Application” box in the upper right hand corner of the synopsis page. Click on “Instructions and Application” and select “Download Application Instructions” to view the certifications. To complete the certifications you must check Block 18 of the SF 424 (R&R). By signing it (pressing
“Submit”), you are certifying to reading and agreeing to abide by the terms in the certifications. No additional documentation is required unless you have lobbying activities to disclose on an SF–LLL, Disclosure of Lobbying Activities.

5.4. Proposals for Assistance Instruments

Proposals for assistance instruments must be submitted electronically through the http://Grants.gov government-wide electronic portal. **You must notify the Contracting POC via email at least 24 hours before the stated proposal due date and time of this notice or your proposal will not be considered.**

5.5. Prior to Electronic Submission

5.5.1. Advance Preparation

Electronic proposals must be submitted through http://Grants.gov. There are several one-time actions your organization must have completed. Long before the proposal submission deadline, verify the persons authorized to submit proposals for your firm have completed these actions. If not, it may take up to 21 days to complete the actions before proposal submission is possible.

5.5.2. Electronic Submission Process

Your firm must obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number, register in SAM, register with the credential provider, and register with http://Grants.gov. Designating an E-Business Point of Contact (EBiz POC) and obtaining a special password called MPIN are important steps in the registration process. Go to http://www.grants.gov/web/grants/applicants/organization-registration.html.

5.5.3. Authorized Organization Representative (AOR)

Your organization’s EBiz POC, identified during SAM registration, must authorize an individual as the Authorized Organization Representative (AOR). This prevents individuals from submitting proposals without permission. The same person may serve as the EBiz POC and AOR.

5.5.4. Grants.gov Organization Registration Checklist

The http://Grants.gov Organization Registration Checklist is located at http://www.grants.gov/documents/19/18243/OrganizationRegChecklist.pdf/fc7e7c18-2497-4b08-8d9b-bfac399947a3 to guide the process. Any questions regarding http://Grants.gov shall be referred to 1-800-518-4726 or email support@Grants.gov.
5.6. Submitting the Electronic Proposal

5.6.1. Application Form

To access application forms and instructions, go to http://grants.gov. Select “Apply for Grant”, then “Download Application Package”. Enter 12.800 as the CFDA number. You should also enter the BAA number, then follow the prompts to download the application package.

5.6.2. Confirmation Page

A confirmation page will be received upon completing the submission to http://Grants.gov. This confirmation page is a record of the time and date stamp used to determine whether the proposal was submitted by the deadline. A proposal received after the deadline is “late” and will not be considered for an award.

5.6.3. Cover Sheet in System

Offerors proposing assistance instruments through http://Grants.gov must also access the DoD RIF Submission Site and complete a proposal cover sheet prior to the due date/time for proposal specified in this BAA. Indicate whether the proposal is for a “Cooperative Agreement” or “Other”. Submission of the assistance technical and cost proposals and SOW is not required through the DoD RIF Submission Site.

6. Proposal Submission for Contracts

Offerors receiving an invitation to submit a proposal shall use the same DoD RIF Submission Website (www.dodsbir.net/rif) used for the DoD RIF white paper submission. Proposals sent by any other means, e.g., hand-carried, postal service mail, commercial carrier, fax, email, etc., will not be considered. The cover sheet (Volume One) is automatically generated by the submission system; the technical proposal (Volume Two), cost proposal (Volume Three), and SOW (Volume Four) shall be submitted electronically through the site. Volumes Two-Four shall be prepared outside the site, then uploaded. Upon completion of the cover sheet, the offeror will be instructed to upload PDF documents for these volumes. If multiple proposals are submitted by the same offeror, a separate cover sheet must be generated for each. Offerors are responsible for ensuring compliant and final submission of proposals. Any additional submission instructions will be provided in the proposal request invitation.

Proposals will be considered “works in progress” and will not be evaluated until the offeror submits the final proposal package for consideration. The DoD RIF Submission Website will provide offerors a printable confirmation of successful proposal submission upon upload completion. Proposals may be uploaded as often as necessary, each time overwriting the file previously submitted. Once a file is overwritten, the previous version is NOT retrievable. Offerors electing to modify proposals in any way must allow enough time to upload a complete updated proposal. Failure to provide a complete modification by the proposal closing date and time will render the offeror’s proposal “late” regardless of whether the offeror had previously submitted a proposal.
Do not lock or encrypt any files uploaded as part of the proposal submission. Proposal prices and terms and conditions shall remain valid for 180 days from the submission date.

Submissions to the DoD RIF submission site, both white papers and proposals, must be UNCLASSIFIED. Confidential/classified white papers/proposals are not permitted. White paper/proposal submissions will be protected from unauthorized disclosure in accordance with FAR 15.207(b), applicable law, and DoD regulations. Offerors are to appropriately mark each page of submissions containing proprietary information. The proposal shall include a Statement of Work (SOW), which contains only unclassified information and does not include any proprietary restrictions.

7. Selection Preference

Selection preference shall be given to small business proposals addressing the below evaluation criteria. Awards to other than small business offerors are allowed but ONLY after the award selection approval authority determines the award is superior to proposals received from a small business.

In accordance with Small Business Administration (SBA) direction and applicable statute, SBIR offerors in each requirement area with white papers rated a “Go” for all white paper evaluation factors, see Section 8.1 below, will be given preference over non-SBIR offerors in the same priority area attaining an equal evaluation outcome.

8. White Paper/Proposal Review Information


There will be four white paper evaluation criteria. All factors will be evaluated using a “Go” or “No Go” decision-making process. White papers deemed “No Go” in any area will not be considered for further review.

Order of Importance: Factor #1 and Factor #2 are equally important. Factor #3 and Factor #4 are equally important. Factors #1 and #2 are significantly more important than Factors #3 and #4. The government is more concerned with obtaining superior technical capabilities than with making awards at a lower cost to the government.

8.1.1. Factor #1: Contribution to the Requirement

The degree to which the technical approach is relevant to an Air Force need or FY13 NDAA thrust area, see Attachment 1, including the degree to which the project;

(a) Accelerates or enhances an AF capability and/or,
(b) Reduces development, acquisition, sustainment, or lifecycle costs of acquisition programs or fielded systems and/or,
(c) Reduces technical risk and/or,
(d) Improves timeliness and thoroughness of test and evaluation (T&E) outcomes.
8.1.2. Factor #2: Technical Approach/Qualifications

The degree to which the technical approach is innovative, feasible, achievable, complete and supported by a technical team that has the expertise and experience to accomplish the proposed tasks. The degree to which a clear transition path has been defined for this effort into a current Air Force program or to a component being supplied to a current or emerging Air Force program. The current and projected TRL for the effort. The degree to which this is considered “game changing” technology which should be pursued regardless of current TRL.

8.1.3. Factor #3: Schedule

The degree to which the proposed schedule is achievable within 24 months from award.

8.1.4. Factor #4: Cost

The degree to which the estimated cost or price is reasonable for the described technical approach and does not exceed $3M ceiling.

The full review and evaluation of white papers will be conducted in two phases. In the first phase, all responsive white papers will be reviewed by government evaluators using the criteria listed in Section 8.1 above.

In the second phase, a team of Air Force representatives from various AF organizations, will review the initial PEO/Center evaluations and recommend candidates for proposal submission. White papers will be selected for proposal invitation based on their prioritization, Section 8.1 of this solicitation, and availability of RIF funding. Selection for proposal invitation will be highly competitive.

8.2. SECOND STEP – Proposal Evaluation Criteria

The selection of one or more sources for award will be based on an evaluation of each offeror’s proposal (both technical and cost/price aspects) to determine the overall merit of the proposal in response to the announcement.

Order of Importance: Factor #1 and #2 are equivalent and of significantly more importance than Factor #3 and #4. Factor #3 and #4 are equivalent and are significantly less importance than Factor #1 and #2.

8.2.1. Factor #1: Understanding of Operational Needs

The offeror’s proposed solution to an Air Force need or FY13 NDAA thrust area shall be evaluated with respect to demonstrated potential for impacting the following aspects:

(a) Accelerates or enhances an AF capability and/or,
(b) Reduces development, acquisition, sustainment, or lifecycle costs of acquisition program or fielded systems and/or,
(c) Reduces technical risk and/or,
(d) Improves timeliness and thoroughness of T&E outcomes.

8.2.2. Factor #2: Soundness of Technical Approach

Technical aspect shall be evaluated based on the following criteria that are of descending order of importance:

(a) Overall Technical Merit – The degree to which the technical approach is innovative, feasible, achievable, complete, supported by a technical team with the expertise and experience to accomplish the proposed tasks, and likely to successfully transition to the Air Force.
(b) Technology Readiness Level (TRL) – Feasibility includes TRL for technologies/processes of 6 (system/subsystem model or prototype demonstration in a relevant environment) at project inception and 9 (qualified through testing and ready for production) by project completion or Subject Matter Expert (SME) statement technology is unique and noteworthy in benefitting the Warfighting capability of the AF.
(c) Transition Plan - Potential for transition of deliverables to future Government needs, including any restrictions on Government use, release, or disclosure of technical data or computer software presenting transition difficulty and/or increased risk/cost to the Government. The degree to which the proposed solution will not preclude/hinder other component/module developers’ interface with, or otherwise developing/replacing/upgrading other parts of the military system/program. The potential for inclusion of SBIR data rights is recognized. SBIR data rights clauses are non-negotiable; award will not be made conditional to forfeiture of data rights.
(d) Metrics – The effectiveness of proposed methods for measurement of progress versus stated goals, e.g., interoperability against an industry standard, opportunity for unit/system/life cycle savings, etc.
(e) Personnel - Availability of qualified technical personnel and their experience with the applicable technologies.
(f) Resources - Availability, from any source, of necessary research, test, laboratory, or shop facilities.

8.2.3. Factor #3: Schedule

The degree to which the proposed schedule is achievable within 24 months from award. Schedule is a substantial factor but ranked equal in priority with Factor #4, and below Factor #1 and #2.

8.2.4. Factor #4: Cost/Price

Cost/Price includes the reasonableness and realism of the proposed cost and fee and consideration of proposed budgets and funding profiles. Cost realism analysis ensures proposed cost:
(a) Is realistic for work to be performed and
(b) Reflects clear understanding of requirements

Cost/Price is a substantial factor, but ranked equal in priority with Factor #3 and below Factor #1 and Factor #2.

NOTE: Risk will be assessed as part of each of the above criterion. No other evaluation criteria will be used. The technical and cost proposals will be evaluated at the same time. The Air Force reserves the right to select for award any, all, part, or none of the proposals received.

8.3. SECOND STEP – Proposal Review and Selection Process

8.3.1. Second Step – Proposal Review and Selection Process Categories

The technical and cost proposals will be evaluated at the same time and categorized as follows:

8.3.1.1. Category I

Proposal is well conceived, scientifically and technically sound, pertinent to the program goals and objectives, and offered by a responsible contractor with the competent scientific and technical staff and supporting resources needed to ensure satisfactory program results. Proposals in Category I are determined to be acceptable but will be recommended for award based on availability of funds. They are normally displaced only by other Category I proposals.

8.3.1.2. Category II

Proposal is scientifically or technically sound but requires further development. May be recommended for award at a lower priority than Category I.

8.3.1.3. Category III

Proposal is not technically sound or does not meet agency needs. Will not be considered for award.

8.3.2. Debriefs

IAW FAR15.505, offerors invited to submit a proposal but not selected for award may request a debriefing. However, please note requests must be received NLT three (3) days after receipt of non-selection notice. No requests received after the three (3)-day period will be fulfilled. Additionally, all debriefs will be delayed until after all AF FY13-funded RIF awards are completed. Also, please note that offerors not invited to submit a proposal based on their white paper submission(s) will not be offered a debrief. The debrief is reserved exclusively for those offers invited to submit a proposal but not selected for award.
9. Award Administration Information

9.1. Award Notices

Offerors that submit proposals will receive either an award document or an email notification that their offer is no longer under consideration. No other information on evaluation status will be available. However, Contracting Officers may contact any and all qualified Offerors at any time. Notification of white paper and proposal selection is not an authorization to begin work.

9.1.1. Email Addresses

Offerors must be aware that it is their responsibility to ensure:

(1) Correct email addresses are provided at the time of submission,
(2) Email notifications reach the intended recipient(s), and
(3) The email is not blocked by the use of ‘spam blocker’ software or other means that the recipient’s Internet Service Provider may have implemented as a means to block the receipt of certain email messages.

9.2. Basis of Award

Awards will be based on the best proposals that are determined to be most beneficial to the Government with appropriate consideration given to the evaluation factors, order of importance and selection preferences. Award will be made to the offerors whose submission is determined to advance the best ideas or concepts, has the highest competence in the specific field of science, technical merit, or importance to agency programs based on the factors and preferences of this BAA. This may not necessarily be the proposal offering the lowest cost/price or receiving the highest evaluated rating.

9.3. Reporting

See Section 1.2, Deliverables.

9.4. Negotiations

IAW FAR 15.306, the Government reserves the right to conduct exchanges with Offerors after receipt of proposals.

10. Other Information

10.1. Support contractors

The DoD may use non-government personnel (e.g. contractor support personnel) in the review and administration of submittals for this BAA. Support contractor employees may have access to proposal information including information that may be considered proprietary. All contractor support personnel having access to any proprietary data are
required to execute nondisclosure agreements certifying that they will not disclose any information pertaining to this solicitation including any proposal submittals, the identity of any submitters, or any other information relative to this BAA. The contracts for provision of support personnel contain Organizational Conflict of Interest provisions and include contractual requirements for non-disclosure of proprietary contractor information.

10.2. Wide Area Work Flow

NOTICE: Any contract award resulting from this solicitation will contain the clause at DFARS 252.232-7003, Electronic Submission of Payment Requests and Receiving Reports (Mar 2008), which requires electronic submission of all payment requests. The clause cites three possible electronic formats in which to submit electronic payment requests. Pursuant to that clause, the Department of Defense is adopting Wide Area Work Flow-Receipt and Acceptance (WAWF-RA). Any contract resulting from this solicitation will establish a requirement to use WAWF-RA for invoicing and receipt/acceptance, and provide coding instructions applicable to this contract. Contractors are encouraged to take advantage of available training (both web-based and DCMA), and to register in the WAWF-RA system at https://wawf.eb.mil. Note: The WAWF-RA requirement does not apply to universities not serviced by Defense Contract Audit Agency (DCAA).

10.3. Item Identification and Valuation

Any contract award resulting from this solicitation may contain the clause at DFARS 252.211-7003, Item Identification and Valuation (Aug 2008), which requires unique item identification and valuation of any deliverable item for which the Government’s unit acquisition cost is $5,000 or more; subassemblies, components, and parts embedded within an item valued at $5,000 or more; or items for which the Government’s unit acquisition cost is less than $5,000; when determined necessary by the requiring activity for serially managed, mission essential, or controlled inventory. Also included are any DoD serially managed subassembly, component, or part embedded within a delivered item and the parent item that contains the embedded subassembly, component, or part. Per DFARS 211.274-3, Policy for Valuation, it is DoD policy contractors shall be required to identify the Government’s unit acquisition cost for all items delivered, even if none of the criteria for placing a unique item identification mark applies. Therefore, proposals must clearly break out the unit acquisition cost for any deliverable items. Per DFARS 211.274-3, “The Government’s unit acquisition cost is the Contractor’s estimated fully burdened unit cost at time of delivery to the Government for cost type or undefinitized line, subline, or exhibit line items” Per DoD, “fully burdened unit costs” to the Government would include all direct, indirect, G&A costs, and an appropriate portion of fee. If you have questions regarding the Unique Item Identification requirements, please contact the Contracting POC. For more information, see the following website: http://www.acq.osd.mil/dpap/pdi/uid/index.html.

10.4. Limitations on Pass Through Charges

As prescribed in FAR 52.408(n)(1) and (2), the provisions 52.215-22, “Limitations on Pass Through Charges – Identification of Subcontract Effort (Oct 2009),” and 52.215-23,
“Limitations on Pass Through Charges (Oct 2009),” are contained in this solicitation.
Any contract value greater than the threshold for cost or pricing data, except fixed price contracts awarded on the basis of adequate price competition, resulting from this solicitation, shall contain the clause at FAR 52.215-23 (or Alt I).


(a) Definitions. “Added value, excessive pass-through charge, subcontract, and subcontractor,” as used in this provision, are defined in the clause of this solicitation entitled “Limitations on Pass-Through Charges” (FAR 52.215-23).
(b) General. The offeror’s proposal shall exclude excessive pass-through charges.
(c) Performance of work by the Contractor of a subcontractor
   (1) The offeror shall identify in its proposal the total cost of the work to be performed by the offeror, and the total cost of the work to be performed by each subcontractor, under the contract, task order, or delivery order.
   (2) If the offeror intends to subcontract more than 70 percent of the total cost of work to be performed under the contract, task order, or delivery order, the offeror shall identify in its proposal—
      (i) The amount of the offeror’s indirect costs and profit/fee applicable to the work to be performed by the subcontractor(s); and
      (ii) A description of the added value provided by the offeror as related to the work to be performed by the subcontractor(s).
   (3) If any subcontractor proposed under the contract, task order, or delivery order intends to subcontract to a lower-tier subcontractor more than 70 percent of the total cost of work to be performed under its subcontract, the offeror shall identify in its proposal—
      (i) The amount of the subcontractor’s indirect costs and profit/fee applicable to the work to be performed by the lower-tier subcontractor(s); and
      (ii) A description of the added value provided by the subcontractor as related to the work to be performed by the lower-tier subcontractor(s).

52.215-23 – Limitations on Pass-Through Charges (Oct 2009)

(a) Definitions. As used in this clause--
   “Added value” means that the Contractor performs subcontract management functions that the Contracting Officer determines are a benefit to the Government (e.g., processing orders of parts or services, maintaining inventory, reducing delivery lead times, managing multiple sources for contract requirements, coordinating deliveries, performing quality assurance functions).
   “Excessive pass-through charge,” with respect to a Contractor or subcontractor that adds no or negligible value to a contract or subcontract, means a charge to the Government by the Contractor or subcontractor that is for indirect costs or profit/fee on work performed by a subcontractor (other than charges for the costs of managing subcontracts and any applicable indirect costs and associated profit/fee based on such costs).
“No or negligible value” means the Contractor or subcontractor cannot demonstrate to the Contracting Officer that its effort added value to the contract or subcontract in accomplishing the work performed under the contract (including task or delivery orders).

“Subcontract” means any contract, as defined in FAR 2.101, entered into by a subcontractor to furnish supplies or services for performance of the contract or a subcontract. It includes but is not limited to purchase orders, and changes and modifications to purchase orders.

“Subcontractor,” as defined in FAR 44.101, means any supplier, distributor, vendor, or firm that furnishes supplies or services to or for a prime Contractor or another subcontractor.

(b) General. The Government will not pay excessive pass-through charges. The Contracting Officer shall determine if excessive pass-through charges exist.

(c) Reporting. Required reporting of performance of work by the Contractor or a subcontractor. The Contractor shall notify the Contracting Officer in writing if—

1. The Contractor changes the amount of subcontract effort after award such that it exceeds 70 percent of the total cost of work to be performed under the contract, task order, or delivery order. The notification shall identify the revised cost of the subcontract effort and shall include verification that the Contractor will provide added value; or

2. Any subcontractor changes the amount of lower-tier subcontractor effort after award such that it exceeds 70 percent of the total cost of the work to be performed under its subcontract. The notification shall identify the revised cost of the subcontract effort and shall include verification that the subcontractor will provide added value as related to the work to be performed by the lower-tier subcontractor(s).

(d) Recovery of excessive pass-through charges. If the Contracting Officer determines that excessive pass-through charges exist;

1. For other than fixed-price contracts, the excessive pass-through charges are unallowable in accordance with the provisions in FAR subpart 31.2; and

2. For applicable DoD fixed-price contracts, as identified in 15.408(n)(2)(i)(B), the Government shall be entitled to a price reduction for the amount of excessive pass-through charges included in the contract price.

(e) Access to records.

1. The Contracting Officer, or authorized representative, shall have the right to examine and audit all the Contractor's records (as defined at FAR 52.215-2(a)) necessary to determine whether the Contractor proposed, billed, or claimed excessive pass-through charges.

2. For those subcontracts to which paragraph (f) of this clause applies, the Contracting Officer, or authorized representative, shall have the right to examine and audit all the subcontractor's records (as defined at FAR 52.215-2(a)) necessary to determine whether the subcontractor proposed, billed, or claimed excessive pass-through charges.

(f) Flowdown. The Contractor shall insert the substance of this clause, including this paragraph (f), in all cost-reimbursement subcontracts under this contract that exceed the simplified acquisition threshold, except if the contract is with DoD, then insert in all cost-reimbursement subcontracts and fixed-price subcontracts,
except those identified in 15.408(n)(2)(i)(B)(2), that exceed the threshold for obtaining cost or pricing data in accordance with FAR 15.403-4.

(End of clause)

Alternate I (OCT 2009). As prescribed in 15.408(n)(2)(iii), substitute the following paragraph (b) for paragraph (b) of the basic clause:
(b) General. The Government will not pay excessive pass-through charges. The Contracting Officer has determined that there will be no excessive pass-through charges, provided the Contractor performs the disclosed value-added functions.

10.5. Ombudsman

AFFARS clause 5352.201-9101, Ombudsman (Aug 2005), will be contained in any contracts or agreements resulting from this BAA. The AFLCMC Ombudsman is Ms. Jill Willingham, Chief, Program Management Division, AFLCMC/AQP, (937) 255-5472, jill.willingham@wpafb.af.mil.

10.6. Points of Contact

Technical – Dwaine Young, AFLCMC/XZI, Air Force RIF Program Manager, 937-656-5152, Dwaine.young@wpafb.af.mil

Contracting – Tyler Printz, AFLCMC/PZIT, Air Force RIF Contracting Specialist, 937-656-5839, William.printz@us.af.mil

10.7. Post-Award Small Business Program Rerepresentation

As prescribed in FAR 19.308, FAR Clause 52.219-28, “Post-Award Small Business Program Rerepresentation (Apr 2012),” is incorporated by reference in this solicitation. This clause will be contained in any contracts resulting from this solicitation. This clause requires a contractor to rerepresent its size status when certain conditions apply. The clause provides detail on when the rerepresentation must be complete and what the contractor must do when a rerepresentation is required.

10.8. Employment Eligibility Verification

As prescribed by FAR 22.1803, FAR Clause 52.222-54, “Employment Eligibility Verification (Jan 2009),” is hereby incorporated by reference in this solicitation. Any contract awarded as a result of this BAA that is above the simplified acquisition threshold and contains a period of performance greater than 120 days shall include this clause. This clause provides the requirement of contractors to enroll as a Federal Contractor in the E-Verify Program within 30 days after contract award.

10.9. Reporting Executive Compensation and First-Tier Sub-contract/Sub-recipient Awards

As prescribed by FAR 4.1403(a), FAR 52.204-10, “Reporting Executive Compensation and First-Tier Subcontract Awards”, is hereby incorporated by reference. Any contract valued at $25,000 or more, excluding classified contracts or contractors with individuals, must contain
this clause. Any assistance award resulting from this announcement may contain the award term set forth in 2 CFR, Appendix A to Part 25, found at http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&sid=45e506bdc1653f7ce8839aec43be8938&rgn=div5&view=text&node=2:1.1.1.3.3&idno=2

10.10. Updates of Publicly Available Information Regarding Responsibility Matters

Any contract or assistance award exceeding $500,000.00 for which an offeror checked “has” in paragraph (b) of the provision 52.209-7 shall contain the clause/article, “Updates of Publicly Available Information Regarding Responsibility Matters (Jan 2011)”.

10.11. Contractor Business Systems

DFARS 252.242-7005, Contractor Business Systems, is hereby incorporated by reference.

10.12. White Paper/Proposal Content Checklist

You may be ineligible for award if all requirements of this BAA are not met on the proposal due date.

(a) Step One: White papers are submitted via the DoD RIF submission site no later than the due date and time specified in this announcement.
(b) Step One and Step Two: White paper and proposal page limits are strictly enforced.
(c) Step One and Step Two: White papers and proposals must be submitted in the format specified in Section 4.
(d) Step Two: Completed Certifications and Representations (Section K) are due with the proposal and may be found at http://www.wpafb.af.mil/library/factsheets/factsheet.asp?id=6790 under Sample Contract Documents” under the “Business Resources Header”.
(e) Step Two: The cost/business proposal must contain all information described in Section 4.5.5.
(f) Step Two: For any subcontracts proposed, the cost/business proposal must contain subcontractor analysis IAW FAR 15.404-3(b).
(g) Step Two: Offerors other than small businesses are to include a subcontracting plan.
(h) Step Two: Offerors with valid, current Forward Pricing Rate Agreements (FPRAs) or Forward Pricing Rate Recommendations (FPRRs) shall submit a copy with the proposal or provide a link where it can be found.
(i) Step Two: Because export control applies, offerors must submit a Certified DD2345, Militarily Critical Technical Data Agreement, with the proposal. The estimated timeframe to obtain a Certified DD2345 is approximately 2-3 weeks.

10.13. Essentially Equivalent Work

This occurs when (1) substantially the same effort is proposed for funding in more than one contract or assistance proposal submitted to the same Federal Agency; (2) substantially the same effort is proposed to two or more Federal Agencies for review and funding consideration; or (3) a specific technical objective and technical design for
accomplishing the objective are the same or closely related in two or more proposals or awards, regardless of the funding source.

While it is permissible, with proposal notification, to submit identical proposals or proposals containing a significant amount of essentially equivalent work (see definition above) for consideration under more than one federal program solicitation, it is unlawful to enter into contracts or assistance agreements requiring essentially equivalent effort. If there is any question concerning this, it must be disclosed to the soliciting agency or agencies before award.

If a white paper or proposal submitted in response to this solicitation is substantially the same as another proposal previously funded, currently funded, or pending with another Federal Agency or DoD Component or the same DoD Component, the offeror must so indicate on the white paper or proposal cover sheet and provide the following information:

(a) Name and address of the Federal Agency(s) or DoD Component to which a proposal was submitted, will be submitted, or from which an award is expected or has been received.
(b) Date of proposal submission or date of award.
(c) Title of proposal.
(d) Name and title of principal investigator for each proposal submitted or award received.
(e) Title, number, and date of solicitation(s) under which the proposal was submitted, will be submitted, or under which award is expected or has been received.
(f) If award was received, state contract number.

Offerors are also instructed to note any other RIF proposals submitted to the Air Force or any other DoD Component.

Note: If this item does not apply, state in the proposal “No prior, current, or pending support for proposed work.”

10.14. Organizational Conflicts of Interest (OCI)

10.14.1. Purpose

The primary purpose of this provision is to aid in ensuring that: the Contractor’s objectivity and judgment are not biased because of its present, or currently planned interests (financial, contractual, organizational, or otherwise) which relate to work under a contract; the Contractor does not obtain an unfair competitive advantage by virtue of its access to non-public Government information regarding the Government’s program plans and actual or anticipated resources; and the Contractor does not obtain any unfair competitive advantage by virtue of its access to proprietary information belonging to others.
10.14.2. Scope

The restrictions described herein shall apply to performance or participation by the Contractor and any of its affiliates or their successors in interest (hereinafter collectively referred to as “Contractor”) in the activities covered by this clause as prime contractor, subcontractor, co-sponsor, joint venture, consultant, or in any similar capacity. The term “proprietary information” for the purposes of this clause is any information considered to be so valuable by its owner that it is held in secret by them and their licensees. Information furnished voluntarily by the owner without limitations on its use, or which is available without restrictions from other sources, is not considered proprietary.

10.14.2.1. Access To and Use of Government Information

If the Contractor, in the performance of this contract, obtains access to information such as plans, policies, reports, studies, financial plans, or data which has not been released or otherwise made available to the public, the Contractor agrees that without prior written approval of the Contracting Officer, it shall not:

(a) Use such information for any private purpose unless the information has been lawfully released or otherwise made available to the public,
(b) Compete for work based on such information after the completion of this contract,
(c) Submit an unsolicited proposal to the Government which is based on such information after such information is released, or
(d) Release such information unless such information has previously been lawfully released or otherwise made available to the public by the Government.

10.14.2.2. Access To and Protection of Proprietary Information

The Contractor agrees that, to the extent it receives or is given access to proprietary data, trade secrets, or other confidential or privileged technical, business, or financial information (hereinafter referred to as “proprietary data”) under this contract, it shall treat such information in accordance with any restrictions imposed on such information. The Contractor further agrees to enter into a written agreement for the protection of the proprietary data of others and to exercise diligent effort to protect such proprietary data from unauthorized use or disclosure. In addition, the Contractor shall obtain from each employee who has access to proprietary data under this contract, a written agreement which shall in substance provide that such employee shall not, during his/her employment by the Contractor or thereafter, disclose to others or use for their benefit, proprietary data received in connection with the work under this contract. The Contractor will educate its employees regarding the philosophy of Part 9.505-4 of the Federal Acquisition Regulation so that they will not use or disclose proprietary information or data generated or acquired in the performance of this contract except as provided herein.
10.14.2.3. **Subcontracts**

The Contractor shall include this or substantially the same clause, including this paragraph, in consulting agreements and subcontracts of all tiers. The terms “Contract”, “Contractor”, and “Contracting Officer”, will be appropriately modified to preserve the Government’s rights.

10.14.2.4. **Disclosures**

If the Contractor discovers an organizational conflict of interest or potential conflict of interest after award, a prompt and full disclosure shall be made in writing to the Contracting Officer. This disclosure shall be made on the OCI Analysis/Disclosure Form provided as an Attachment to this contract, and shall include a description of the action the Contractor has taken or proposes to take in order to avoid or mitigate such conflicts.

10.14.2.5. **Remedies and Waiver**

For breach of any of the above restrictions or for non-disclosure or misrepresentation of any relevant facts required to be disclosed concerning this contract, the Government may terminate this contract for default, disqualify the Contractor for subsequent related contractual efforts, and pursue such other remedies as may be permitted by law or the contract. If, however, in compliance with this clause, the Contractor discovers and promptly reports an organizational conflict of interest (or the potential thereof) subsequent to contract award, the Contracting Officer may terminate this contract for the convenience of the Government if such termination is deemed to be in the best interest of the Government.

10.14.2.6. **Modifications**

Prior to contract modification, when the Scope of Work is changed to add new work or the period of performance is significantly increased, the Contracting Officer may require the Contractor to submit either an organizational conflict of interest disclosure or an update of the previously submitted disclosure or representation.

10.15. **False Statements**

Knowingly and willfully making any false, fictitious, or fraudulent statements or representations may be a felony under the Federal Criminal False Statement Act (18 U.S.C. Sec 1001), punishable by a fine of up to $10,000, up to five years in prison, or both.

10.16. **Publication Approval**

Government review and approval will be required prior to any dissemination or
publication, except within and between the Contractor and any subcontractors, of classified and non-fundamental information developed under this contract or contained in the reports to be furnished pursuant to a contract.

10.17. Use of Animals and Human Subjects in Research

All research, development, testing, experimentation, education or training involving the use of animals shall comply with the applicable federal and agency rules on animal acquisition, transport, care, handling, and use. For submissions containing animal use, proposals shall briefly describe plans for their Institutional Animal Care and Use Committee (IACUC) review and approval. All Recipients must receive their IACUC’s approval as well as secondary or headquarters-level approval by a DoD veterinarian who is trained or experienced in laboratory animal medicine and science. No animal research may be conducted using DoD funding until all the appropriate DoD office(s) grant approval.

All research involving human subjects, to include use of human biological specimens and human data, shall comply with the applicable federal and state laws and agency policy/guidelines for human subject protection. Institutions to be awarded funding for research involving human subjects must provide documentation of a current Federal Assurance of Compliance with Federal regulations for human subject protection, for example a Department of Health and Human Services, Office for Human Research Protections Federal Wide Assurance [http://www.hhs.gov/ohrp]. Additional Federal Assurance documentation may also be requested by the awarding DoD Component. All institutions engaged in human subject research, to include subcontractors, must also have a valid Assurance.

In addition, personnel involved in human subjects research must provide documentation of completing appropriate training for the protection of human subjects. Institutions proposing to conduct human subject research that meets one of the exemption criteria in 32 CFR 218.101 are not required to have a Federal Assurance of Compliance. If selected, institutions must also provide documentation of Institutional Review Board (IRB) approval or a determination from an appropriate official in the institution that the work meets one of the exemption criteria with 32 CFR 219. As part of the IRB review process, evidence of appropriate training for all investigators shall accompany the protocol. The protocol, separate from the proposal, must include a detailed description of the research plan, study population, risks and benefits of study participation, recruitment and consent process, data collection and data analysis. No funding can be used towards human subject research until all approvals are granted.

10.18. Recombinant DNA

All research involving recombinant DNA must include documentation of compliance with Department of Human and Health Services (DHHS) recombinant DNA regulations, and shall comply with the applicable federal and state law, regulation and any additional agency guidance. Research must be approved by an Institutional Biosafety Committee (IBC).

The DoD High Performance Computing Program (HPCMP) furnishes the DoD S&T and DT&E communities with use-access to very powerful high performance computing systems. Awardees may be eligible to use HPCMP assets in support of their funded activities if Program Office approval is obtained and if security/screening requirements are favorably completed. Additional information and an application may be found at http://www.hpcmo.hpc.mil/.

10.20. Subcontracting

For proposed awards to be made as contracts (that exceed $650,000) to other than small businesses, the offeror is required to submit a Small Business Subcontracting Plan. As such, Subcontracting Plans will be evaluated to ensure that submissions are compliant with FAR Subpart 19.7.

For proposed awards made as contracts to small businesses at any value, the offeror shall provide a statement which demonstrates how it intends to provide meaningful subcontracting opportunities to support this policy.

10.21. Limitations on Other Transactions

Offerors are advised that an Other Transaction for Research Agreement (10 U.S. Code § 2371) may only be awarded if the use of a standard contract is not feasible or appropriate. Offerors are advised that an Other Transaction (OT) for Prototype Agreement (P.L. Law 103-160 § 845) may only be awarded if there is:

(a) At least one nontraditional defense contractor participating to a significant extent in the prototype project, or
(b) No nontraditional defense contractor is participating to a significant extent in the prototype project, but at least one of the following circumstances exists:
   i. At least one third of the total cost of the prototype project is to be paid out of funds provided by the parties to the transaction other than the federal government. The cost share should generally consist of labor, materials, equipment, and facilities costs (including allocable indirect costs).
   ii. Exceptional circumstances justify the use of a transaction that provides for innovative business arrangements or structures that would not be feasible or appropriate under a procurement contract.
(c) Although use of one of these options is required to use an Other Transaction for Prototype agreement as the procurement vehicle, no single option is encouraged or desired over the others.

For purposes of determining whether or not a participant may be classified as a nontraditional defense contractor and whether or not such participation is determined to be participating to a significant extent in the prototype project, the following definitions are applicable:

“Nontraditional defense contractor” means a business unit that has not, for a period of at
least one year prior to the date of the OT agreement, entered into or performed on:

i. Any contract that is subject to full coverage under the cost accounting standards prescribed pursuant to Section 26 of the Office of Federal Procurement Policy Act (41 U.S.C. 422) and the regulations implementing such section; or

ii. Any other contract in excess of $500,000 to carry out prototype projects or to perform applied research or advanced development projects for a Federal Agency that is subject to the Federal Acquisition Regulation.

“Participating to a significant extent in the prototype project” means that the nontraditional defense contractor is supplying a new key technology or product, is accomplishing a significant amount of the effort wherein the role played is more than a nominal or token role in the research effort, or in some other way plays a significant part in causing a material reduction in the cost or schedule of the effort or an increase in performance of the prototype in question.

Offerors are cautioned that if they are classified as a traditional defense contractor, and propose the use of an OT, the Government will require submittal of both a cost proposal under the guidelines of the FAR/DFARS, and a cost proposal under the proposed OT, so that an evaluation may be made with respect to the cost tradeoffs applicable under both situations. The Government reserves the right to negotiate either a FAR based procurement contract, or Other Transaction as it deems is warranted under the circumstances.
ATTACHMENT 1
FY13 AF RIF PROGRAM
AF-IDENTIFIED CRITICAL REQUIREMENTS/
FY13 NDAA THRUST AREAS

1) NDAA Thrust Areas:

1.a. Enhancing Energy Security and Independence. For investment in technologies that will improve energy efficiency, enhance energy security, and reduce the Department’s dependence on fossil fuels through advances in traditional and alternative energy storage, power systems, renewable energy production and more energy efficient ground, air, and naval systems.

1.b. Developing, Utilizing & Maintaining Advanced Materials. For a broad range of materials technologies that can provide: Enhanced performance in extreme environments; improved strength and reduced weight for the spectrum of applications ranging from aerospace to lighter soldier loads; greater survivability of ground, air, and naval systems; and reduced life cycle costs through better maintainability for a wide variety of the challenging environments and unique properties demanded of military systems. Such materials could include advanced composites and metals, nanomaterials, and rare-earth alternatives.

1.c. Improving Manufacturing Technologies and Capabilities. For advanced and innovative manufacturing technologies across the spectrum of applications to significantly compress design to production time cycles, reduce cost, minimize waste and energy consumption, and improve product quality and reliability. Based on coordination with the Office of the Deputy Assistant Secretary of Defense for Manufacturing and Industrial Base Policy, needed manufacturing technology advances include: Advanced joining techniques (e.g., composite bonding, friction stir welding, and laser welding) for shipbuilding, aviation and combat vehicle programs; flexible automation and advanced robotics to improve the yield of critical parts; techniques for improving transparent ceramics that satisfies performance, cost, and weight goals for both Soldier and weapon system armor; additive manufacturing to fabricate parts in a layer-by-layer fashion directly from a digital design; manufacturing for portable power such as fuel cells; electronics manufacturing for short wave infrared, photonics / radio frequency components and three-dimensional chip stacking including thermal management; and secure network applications that provide for secure protocol transfer, integrated data sharing, and protection of intellectual property.

1.d. Advanced Microelectronics. The development of resilient advanced microprocessors, application- specific integrated circuits, field programmable gate arrays, printed circuit boards, photonics devices, and other related electronics components for the next-generation of military and intelligence systems, including commercial-off-the-shelf (COTS) technologies or applications for the Advanced Components for Electronic Warfare (ACE) Program: Developing integrated photonic circuits (IPC); millimeter-wave source and receiver components for EW (MMW); reconfigurable and adaptive RF electronics (RARE); and heterogeneous integration for photonic sources (HIPS).
1.e. **Developing Cybersecurity Tools.** Full-spectrum cyberspace operations require full situational awareness of the battlespace in the cyber domain that allow for complementary offensive and defensive actions. To support this requirement, develop and demonstrate capabilities to rapidly and thoroughly enumerate, characterize, and visualize friendly, neutral, and adversary networks down to the device level. Specific elements of interest include: Cooperative and non-cooperative mapping techniques/capabilities, including internet and network mapping; geo-location of network devices and nodes; techniques for inferring additional system details; techniques to increase the speed of mapping and discovery; software reverse engineering and vulnerability analysis; network data collection and analysis; and new innovative defensive techniques against cyber-attacks—especially in virtual environments, and integrated cloud security capabilities.

2) **PEO STRATEGIC SYSTEMS:**

2.a. **ICBM Battery.** Ideally, it should be possible to build a battery or other energy storage device using modern technology that is capable of being stored for extended periods of time (20 – 30 years), be capable of meeting a variety of voltage, current, capacity and environmental requirements and have the same or less volume and reduced mass. While energy storage technologies are advancing quickly, the requirement for very long storage intervals has been prohibitive to replacing the squib-activated batteries with an alternative that might be easier to manufacture.

A technology that could meet these requirements could have uses in other Air Force munitions and aircraft that have emergency or reserve power requirements.

2.b. **ICBM Ground Cadmium Plating Replacement (NI).** The objective of this thrust area request is to establish a cadmium replacement for the ICBM Weapon System. Cadmium plating is used in the Launch Facility (LF) and Missile Alert Facility (MAF) Motor Generators. Motor Generators parts are coated with cadmium to inhibit corrosion, ensure a low electrical signature (bonding and grounding) and aid in the ability to withstand a nuclear environment. Cadmium is one of the EPA-17 chemicals selected for reduction. Executive directive 13148 and FAR part 23.703 states to reduce use and/or replace cadmium plating whenever possible. Zinidal (Zn-Ni) product has been selected as the cadmium replacement. In order to incorporate at Depot for motor generator and field plating repairs, the complete implementation of Dalistick Zn-Ni for cadmium Type I & II is needed.

2.c. **ICBM Launch Facility (LF) and Missile Alert Facility (MAF) Emergency Battery Upgrades (NI).** The objective of this thrust area request is to provide a supportable design for the LF and MAF emergency batteries. Production of the current 1960’s vintage battery design is becoming increasingly difficult due to materials obsolescence. Additionally, the existing qualified manufacturing processes and technologies are outdated which contribute to significantly higher than desired failure rates. There is a need to address the ICBM emergency battery manufacturing processes, rework, material obsolescence, safety, quality deficiency issues, and outdated technologies to reduce cost and decrease battery failures. The end objective is to upgrade C&D
Batteries (sole source supplier) associated product and manufacturing equipment to ensure ICBM Weapon System requirements for form, fit, function, system safety and hardness are met.

2.d. **LRU Reliability Prediction Model (NC).** Develop an accurate LRU level reliability prediction model for dormant aging weapon systems and limited maintenance test data.

PHASE I: Identify and develop methodologies for predicting reliabilities of subsystems using representative data. Identify and evaluate mechanisms for proofing or validating the methodologies. Deliverable is a paper or papers that explain methodologies and mechanisms for validating the methodologies.

PHASE II: Develop prototype computer code model based on Phase I findings and that meets a set of criteria developed. Criteria will be similar as in description above. Demonstrate the accuracy of the computer code to predict reliability of dormant subsystems using representative data.

PHASE III DUAL USE APPLICATIONS: Usable by other dormant systems/subsystems including the new Long Range Stand Off (LRSO) Cruise Missile, Rocket Motors, Nuclear Bombs, conventional missiles and bomb systems, etc. Other industries with systems/subsystems that remain dormant for extended periods of time, require high reliability and are being considered for use past their original designed service life.

3) **PEO WEAPONS:**

3.a. **Denied Area Technologies.** Seeking innovative technologies to improve operational system performance including but not limited to:
- Enhance position, navigation, and timing (PNT) accuracies.
- Improve precision targeting/delivery, in GPS-denied environments.
- Prevent exploitation of systems lost in denied areas (anti-tamper technologies).

3.b. **Improved Target Prosecution Technologies.** Seeking technologies that will:
- Enhance target recognition (sensor sensitivity, sensor fusion, target identification).
- Broaden the target set (reduced collateral damage, enhanced lethality, enhanced access and penetration).
- Improved fuze capabilities (survivability, height-of-burst (HOB) performance, fuzing location/target vulnerability detection).
- Real-time data link execution and planning, and other associated innovations.

3.c. **Replacement Technologies for Cluster Bombs.** Seeking technologies to enable replacement of cluster bombs while maintaining an area attack capability.

4) **PEO FIGHTER/BOMBER:**

4.a. **Alternative Aircraft Structural Component Repair Methods.** Seeking advanced technologies for aircraft structural component repair, such as Cold Spray Technology methods, for improving efficiency to provide a repair alternative in the field or for
depot maintainers to recover damaged secondary structure metal (aluminum) components. Technology must demonstrate sufficient bearing and shear stress capability along with capability to achieve repairs on materials of varying thickness.

4.b. **Improvements in LO Maintainability.** Improvements in LO maintainability:
- Materials with improved durability, adhesion and/or higher temperature resistance.
- Better repair processes and electromagnetic verification equipment to quantify the quality of repairs.
- Ability to prioritize maintenance and improved diagnostic tools are desired as well.

4.c. **Improved Materials for Wing Attachment Bolts and Associated Testing.** New materials such as corrosion resistant and high strength steel as well as other materials provide an opportunity to significantly reduce the cost of maintenance in a wide variety of aircraft including the F-16 by eliminating the need to periodically remove and replace wing attachment bolts. Development of materials should be made based on both environmental and load requirements. Testing will be required by the contractor to make sure the suggested bolts meet all requirements.

4.d. **Improved Coatings to Eliminate Canopy Water Pooling.** Seeking innovations to mitigate canopy water pooling for a wide variety of fighter aircraft including the F-16 and other fighter platforms caused by use of traditional coating materials. Current coatings are allowing water to accumulate around the canopy, which occurs during critical phases of flight (i.e. landing), inhibit a pilots’ ability to observe external visible cues.

4.e. **Electronic Protection Threat Emulation.** Seeking technologies to incorporate the top 5 most prolific and effective Electronic Countermeasures to Active Electronically Scanned Array (AESA) Radar Systems. Study of these threats needs to be coordinated with National Air & Space Intelligence Center (NASIC) for the formulation and construction of waveform generators with interactive capability with various radar vendor Software Integration Lab and the platform primes Avionics Integration labs for test and evaluation of Electronic Protection methods against these threats.

4.f. **Transition Trade Study of Active Electronically Scanned Array (AESA) Radar Spread Spectrum Techniques.** Seeking ways of transitioning the latest radar spread spectrum techniques to various AESA radar systems t hardware and software. The use of spread spectrum for radar has been conducted at the research level for over ten years. The desire here is to transition the most promising recent techniques to emerging AESA radar systems. A list should be developed of both hardware and software changes needed for a variety of AESA radar systems and Research and Development risk areas and trade space needed to make this technology transition.

4.g. **Expand the Data Transfer Rates within Legacy Aircraft without Adding Wires.** Seeking ways to provide the capability to expand missions by enabling the intercommunications within legacy aircraft to grow to at least 100Mbps without having to add any wires or cables. Current legacy aircraft are limited in the ability to transfer data between positions on the vehicle. Current missions have not caused the internal transfer rates to be exceeded. But future missions (such as Advanced Tactical Data
Links) are highly likely to exceed the transfer rate limits. Many aircraft will be impacted. Flight testing in military aircraft is recommended.

4.h. **5th Generation Data Link Antenna.** Seeking innovations to improve technologies related to Intra-Flight Data Link (IFDL) and Multifunction Advanced Data Link (MADL) antennas (independent or dual-band). Current options require a large footprint and a protrusion from the skin of the aircraft. Conformal/flush mounting and maximal/full line-of-sight coverage are desired qualities.

4.i. **Data Transfer Device (DTD) Obsolescence.** Seeking a solution that will universally apply to all aircraft without requiring hardware modifications on the aircraft. This solution would take existing technology that has been developed as a result of an existing Defense Micro Electronics Agency on PCMCIA DTD technology and transition it to legacy such as the F-15, F-16, and A-10 aircraft (currently it cannot be transitioned to these aircraft).

4.j. **Aging Aircraft Structures Maintenance Technology.** Seeking technologies to more effectively maintain structures in aging aircraft. Vendors should propose proactive structural technology solutions to address existing and imminent airframe sustainment challenges such as premature fatigue cracking and corrosion, increasing number and frequency of required nondestructive inspections, and unanticipated in-service fatigue cracking. Solutions which extend the life of existing parts without replacement, which improve the efficiency or capability of nondestructive inspection, or which improve the accuracy and efficiency of structural analyses used to identify and manage fatigue cracking control points are preferred.

5) **PEO ISR & SOF:**

5.a. **Sensor Data Processing.**
- Advanced on-board processing and standard architecture technologies to support high output and multiple sensor processing prior to data downlinking.
- On-board processing, data fusion/correlation, compression and data storage solutions for sensors that generate tremendous volumes of data.
- Innovative on-board Data to Decisions (D2) applications that will reduce the time and manpower associated with the analysis of large data, leading to actionable data.

5.b. **Search and Rescue.**
- Miniature robotics for search and rescue. Seeking miniature/nano robots with communications capability to insert into tight, confined spaces in order to search for, detect, and report location of isolated or trapped personnel to facilitate recovery operations.

6) **PEO C3I & NETWORK:**

6.a. **Enterprise Cybersecurity Solutions Program Management Office (PMO).** The design and development of a software-enabled, multi-dimensional Enterprise Cybersecurity Solutions PMO framework that supports user access controls, integrated
secure database(s), and traditional PMO and user-defined subject matter features and functions to include multiple sub-PMO integrations.

6.b. **Cyber Mission Assurance via Mission Mapping.** Development of capabilities that support correlation and visualization of connections between AF and DoD missions; communications systems, capabilities, services; threats; vulnerabilities; and physical infrastructure to support real-time mission assurance. Solutions that enhance the AF's capability to perform automated infrastructure discovery, application and service status (correlation), mission and risk modeling, and visualization are of specific interest.

6.c. **AF Business Systems Common Computing Environment (CCE) Services.** Seeking technologies and solutions for a centralized computing infrastructure where Air Force business systems applications will develop, integrate, test, train, and field their capabilities. The CCE would increase system security through centralization of resources and single security architecture.

6.d. **Process Level Virtualization.** Seeking solutions based on assured process level virtualization capability to protect the confidentiality and integrity of the selected processes within Air Force information handling environments.

6.e. **Modernize the Survivable Nuclear Command, Control, and Communication Network.** Development of a modern, interoperable, survivable, anti-jam waveform for the Very Low Frequency (VLF) Minimum Essential Emergency Communication Network (MEECN) that will exploit the modern processing in future VLF receivers but that can also be hosted on legacy VLF receivers. The new mode is envisioned as the single, future MEECN waveform for CJCS Emergency Action Messages (EAMs) and should improve upon both the reception robustness and speed of existing VLF waveforms, while also decreasing Size, Weight, and Power requirements for the VLF transmission hardware. A new waveform is needed to address shortfalls in current waveforms and to consolidate today’s current multi-waveform transmission sequence that is exceedingly long and stressful on the airborne transmitters.

6.f. **Airborne Antenna for Multi-Band Radio Frequency (RF) Employment.** In the migration to Remotely Piloted Aircraft (RPA) related to the space limitations on RPAs. Specifically the Air Force is interested in new antenna technology that improves dB margins, sensitivity, interference (cosite), and transmit ranges to include, but not limited to, phased array antennas, conformal antennas, and etched antennas (with power application spectrum selection), etcetera. Development of a candidate antenna, or antennas, for multi-band RF employment on an airborne platform, RPA, or airborne pod.

7) **PEO SPACE:**

Sustaining National Security Space Capabilities. Seeking technologies to maintain and enhance the strategic and tactical national security advantages afforded to the US by space; and energize the space industrial base supporting US national security. Of particular interest are:
7.a. Improved Data Fusion Algorithms for Space-Based Missile Warning, Missile Defense, and Battle Space Awareness.


7.c. Increased Persistence of Space-Based Intelligence, Surveillance and Reconnaissance (ISR).


7.e. Improved Detection and Monitoring of Potential Space-Based Threats.

7.f. Technologies to Increase Resiliency of Space Infrastructure.

7.g. Technologies to Increase Cross-Domain Capabilities to Enhance Resilience.

7.h. Increased Autonomy for Command and Control (C2) Systems to Increase Resiliency and Reduce Manning.

7.i. Technologies Enabling Highly Efficient On-Orbit Maneuvers and Longer On-Orbit Life.

7.j. Enable Multiple Simultaneous Contacts to Reduce Logistics Tail of Satellite Operations.

7.k. Standardized and Miniaturized Components and Interfaces for Satellite Buses and Payloads.


7.m. User-Friendly Interfaces Providing Space Capabilities for Theater Commands.


7.o. Advanced Photonics, Quantum and Carbon Electronics, and Improved Key Building Blocks for Future Responsive Space Systems.

8) PEO SPACE LAUNCH:

8.a. Oxygen Rich Staged Combustion (ORSC) Cycle Liquid Rocket Engines. Seeking technologies to enable the domestic design, development, and production of ORSC propulsion systems. This technology area would include:
   • Advancements in Oxygen compatible coatings & materials
   • Physics-based design tools
   • Combustion stability modeling & scalability
- Other related technologies that would reduce technology risk associated with a potential ORSC booster engine development program. These capabilities would enhance the government’s ability to reduce reliance on Russian supplied engines.

8.b. **Additive Manufacturing Technology to Take Advantage of Advancements in Manufacturing Capability.** Development of additive manufacturing technologies that could significantly reduce the cost of launch systems and low-rate production units.
- Advancements in Selective Laser Manufacturing (SLM)
- Electron Beam Melting (EBM),
- Advanced Process controls
- Updated material property specifications
- Component design updates
- Non-Destructive Evaluation (NDE) techniques for Additive Manufacturing

9) **PEO BATTLE MANAGEMENT:**

9.a. **Information Processing.**
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2530 C Street  
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Wright-Patterson AFB, OH 45433-7607

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9.b. **Spectrum Management Tools.** Seeking technologies and tools related to expediting and streamlining the preparations for and DoD/Agency Processing/Approvals of
Application for Equipment Frequency Allocation, typically referred to as DD Form 1494. Current system is encumbered with labor-burdensome and excessively lengthy processing times resulting in significant delays to acquisition programs (Ref JCIDS processes in DoDI 5000.02). The technologies and tools being sought should greatly reduce the processing and labor burdens and timelines associated with obtaining frequency approvals for DOD acquisitions for new systems, and major modifications for legacy systems.

9.c. **Information Assurance.** Seeking an Approved and Accredited solution that simultaneously addresses the security requirement to implement Public Key Infrastructure (PKI) hard tokens, single sign on, and multiple virtualizations of applications in a federated computing environment.

9.d. **Radar Test Sources.**
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9.e. **Command and Control, Battle Management Effectiveness (C2BM).**
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9.f. **Small VTOL UAV for ISR.**
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9.g. **Light-weight MTI radar for small UAV.**
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9.h. **Real Time, Long Focal length, Compact, Multi-Spectral Imager for Small UAV.**
Seeking multi-spectral imagers that can support long range ISR applications, while maintaining compact features to fit on small UAVs.

9.i. **Modeling and/or Simulation Environment.** Test and analyze the effectiveness of additional space based sensors.

9.j. **Future Data Links and Data Communications.**
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9.l. Sensors on Forward-based C2 Platforms. Specific information regarding this topic area will only be provided to interested vendors pending submission and approval of a certified DD2345 MILITARILY CRITICAL TECHNICAL DATA AGREEMENT.

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9.m. Space Situational Awareness (SSA) – Detect, Track & Identify.
   - Developing alternative active and passive sensor technologies to detect and track space objects in a way which significantly lowers cost of operations and sustainment. If, for example, passive technologies could be fielded to deliver the same or better level of detection as active systems, then energy costs (i.e. no emitter) would be minimized.
   - Developing intelligent sensor network technologies for optimizing real-time sensor performance by better utilizing combinations of sensors and data to accomplish what individual sensors cannot. This capability must be rapid (within the space object’s risk timeline) and selective (matching sensor capabilities, geography and availability to the mission need).

9.n. Space Situational Awareness (SSA) – Characterization.
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9.o. Space Situational Awareness (SSA) – Data Integration and Exploitation.
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10) PEO JSF:

10.a. **Improved System Affordability.** Improvements that drive down Unit Recurring Flyaway (URF) cost, production span time, or improve production quality of Air Force acquisition programs.

10.b. **Improved Life Cycle Cost Improvements.** Improvements that drive down sustainment/life cycle costs by improving reliability or availability of components, reducing cost of spares, improving maintenance man hour requirements, reducing logistics footprint, and other methods of life cycle cost reduction.

11) PROPULSION DIRECTORATE:

Engine Sustainment Technologies. The AFLCMC Propulsion Directorate is seeking technologies which will reduce the time and cost associated with engine sustainment. Technologies may include:

11.a. **Improved Durability Materials for Engines.**

11.b. **Improved Coatings for Engines.**

11.c. **Automated Repair Technologies for Engines.**

11.d. **Physics Based Design and Lifting Systems for Engines.**

11.e. **Low cost flexible manufacturing for Engines.**

11.f. **Sensor and NDI Technology for Engines.**

11.g. **Fuel Burn Reduction for Engines.**

11.h. **Component Life Management/Life Extension for Engines.**
12) AIR FORCE SUSTAINMENT CENTER (AFSC):

Manufacturing, Repair & Maintenance Processes: Seeking Improvements in Manufacturing Technology and Industrial Base: Seeking technologies with benefits to the Air Force to reduced waste, minimize cost, increase energy efficiency, improve cycle time, increase maintainability, and improve product quality and reliability.

12.a. Advanced Additive Manufacturing Technologies. Advanced technologies in additive manufacturing techniques, part qualifications, and the integration of these elements; Reverse engineering, model generation, and 3D model conversion of legacy drawings; Portable and mobile metrology solutions for First Article acceptance.


12.c. Advanced Affordable & ESOH Friendly Coatings/Paint/Plating Removal Technologies Including Chrome Hazard Abatement. Cost-efficient portable and/or automated paint and coating removal technologies that are safe to the technicians, ergonomically sound and yield non-toxic industrial waste. Examples include but are not exclusively, replacement of aquamizers for removal of poly coatings in aircraft fuel and portable containment systems for on aircraft sanding/grinding, to accommodate chromate hazard abatement.

12.d. Advanced Affordable & ESOH Friendly and Comparable Coating/Paints/Plating Application Technologies. Cost-efficient coating/plating application technologies that are environmentally friendly. Included are coating/plating solutions for aluminum or steel on inside or outside diameter surfaces which retain comparable or better characteristics to baseline methods in terms of wear, hardness, corrosion, embrittlement/SCC, and fatigue; environmentally friendly paint/primer system solutions (including conversion coatings, primers, and topcoats) especially considering adhesion, wear control and corrosion protection; methods to reduce energy demands or other costs associated with coating/plating processes.

12.e. Real-Time on Demand Portable & Mobile Access to Electronic Maintenance/Repair Technical Data, Manuals, and Forms. Advanced technologies in on-demand technical information, maintenance tasking and process metrics. Utilizing advanced Business Process Management (BPM) tools in a lean/six sigma manufacturing and repair environment on mobile devices to provide real time or near real time two-way information and forms/process automation for maintenance crews, process controllers and technical authorities to facilitate maintenance and repair in a high velocity environment.

12.f. Advance Miniaturized Technologies for the Automated Tracking of Tools and Equipment Used in an Active Maintenance Environment. Advance miniaturized technologies for the automated tracking of tools and equipment used in an active maintenance environment. Technology must interface with advanced BPM tool sets.
utilizing a mobile data infrastructure with automated work flow that would provide real
time or near real time information for maintenance crews and process controls.

12.g. Advanced Technologies in Repair and Testing of Active Electronically Scanned Array (AESA) Technology. Advanced technologies in repair and testing of Active Electronically Scanned Array (AESA) technology. Technology must aid in the performance evaluation and characterization of AESA beam patterns and operations without an antenna range. Technology must aid in the repair and test of the array controllers and associated interfaces to facilitate sustainment.

12.h. Advanced Technologies in Support of Legacy Systems to Insert Anti-Tamper Technologies. Advanced technologies in support of legacy systems to insert Anti-Tamper technologies. Technology must aid in the reuse of current software to the greatest extent possible while complying with Congressional and Office of the Secretary of Defense (OSD) guidance. The technology must be maintainable and sustainable in an Integrated Support Facility environment allowing for proper controls.

12.i. Advanced Technologies to Maintain/Sustain and Test Hardware/Software for C4ISR Enterprise. Advanced technologies in Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) modeling and simulation (M&S) and/or hardware in the loop configurations of an Integrated Support Facility environment to support hardware, software and firmware sustainment of the distributed portions of a C4ISR Enterprise. Technology must aid in the evaluation and characterization of C4ISR technology to facilitate sustainment of the distributed enterprise. Technology must aid in the sustainment of the main subcomponents of the C4ISR enterprise, M&S of associated subcomponents and monitoring and control of interfaces to facilitate sustainment.

12.j. Technologies to Address Fraudulent/Counterfeit Electronic Parts Avoidance, Detection, Mitigation, and Disposition for the Supply Chain. Supply Chain Management: Technologies are sought to address fraudulent/counterfeit electronic parts avoidance, detection, mitigation, and disposition. Solutions should address the processes required to eliminate fraudulent/counterfeit electronic parts from the supply chain for Air Force weapon systems.

12.k. AFSC Depot Maintenance Energy Use Reduction and Monitoring Technologies. Seeking technologies to improve energy efficiency, enhance energy resiliency, and reduce dependence on fossil fuels, commercial electrical grids, and traditional compressed air and steam systems through alternative energy storage, power systems, renewable energy production and more energy efficient equipment use, and energy loss monitoring and management system. Solutions are sought in energy generation, energy efficiency monitoring and control, and energy management which reduces or monitors process energy (manufacturing processes) or non-Process Energy (temperature control, ventilation, lighting).
ATTACHMENT 2
WHITE PAPER FORMAT
WHITE PAPER BODY (limit to 3 pages)

(1) Contribution to the Requirement: Provide a high-level project overview describing:

- How and to what degree the technical approach addresses the operational challenge area and/or an acquisition program need:
  - **Enhanced Military Capability** – Describe how your proposed project significantly increases or improves the military capabilities in relationship to operational challenge areas, or acquisition programs.
  - **Accelerated Military Development Capability** – Describe how your proposed project accelerates the development and ability to deploy military capabilities required for use by the Department of the Defense.
  - **Acquisition Development Cost Reduction** – Describe how your proposed project reduces the acquisition development and total ownership costs of the identified programs or components.
  - **Fielded Systems Sustainment Cost Reduction** – Describe how your proposed project reduces the sustainment costs of the identified fielded system, programs, or components.
- The current Technology Readiness Level (TRL) of the technology and/or product and how it will transition to military systems or programs. See DOD Deskbook 5000 2-R for TRL definitions (https://acc.dau.mil/CommunityBrowser.aspx?id=23170).

(2) Technical Approach: Describe how the proposed technical approach is innovative, feasible, achievable, complete, and supported by a technical team that has the expertise and experience to accomplish the proposed tasks, including:

- Project objectives and scope.
- Overview of tasks and methods planned to achieve each objective and the final product to be delivered.
- Key Personnel (including subcontractors and consultants).
- Facilities/Equipment necessary to carry out the proposed effort.
- Related Prior or Current Work, including SBIR/STTR contracts and IR&D Projects.

(3) Schedule: Describe how the proposed schedule is achievable for the proposed technical approach. Transition to military systems or programs is expected within 36 months of award (however, efforts beyond the 24 month period of performance will not be funded through the Air Force RIF Program). Discuss:

- Major activities/milestones.
- Deliverables.
- Metrics/measures of success.
- Potential risks and risk mitigation plans.

(4) Costs: Describe the estimated costs for the proposed technical approach.
## ATTACHMENT 3
### WHITE PAPER TEMPLATE
#### QUAD CHART FORMAT (limit to 1 page)

*(Attachment 3, White Paper Format, Quad Chart*)

<table>
<thead>
<tr>
<th>Project Title, Company Name, and AF Requirement Number/Title</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>(Arial 24 pt Bold)</em></td>
</tr>
</tbody>
</table>

NOTE: All information in four quadrants shall be in 12-point Arial Normal.

### Technology Description
- Brief and to the point
- Few bullets in non-technical/plain English
- Technology Readiness Level (TRL); current and anticipated

### The "So What"
- Critical need or NDAA Thrust Area addressed
- Specific Outcomes benefitting the Warfighter
- Once developed, where it will be used
- How the technology will transition to a current Air Force program or to a component being supplied to a current or emerging Air Force program

### Project Objective and Scope:

#### Key Deliverables:
- Data (specific)
- Hardware (specific)
- Software (specific)
- Other

#### Key Subcontractors:

#### Facilities/Equipment Required:

#### Related Prior or Current Work:

### Estimated Cost: $ ______________

### Notional Project Schedule Milestones:
(Can be a simplified GANNT Chart)

### Metrics/Measures of Success:

Company Proprietary Information