

ONR BAA Announcement # N00014-18-S-B002



BROAD AGENCY ANNOUNCEMENT (BAA)

Armored Reconnaissance Vehicle (ARV)

Advanced Technology Development

Future Naval Capability (FNC)

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I. OVERVIEW OF THE RESEARCH OPPORTUNITY

This publication constitutes a Broad Agency Announcement (BAA) for awards by the ONR Contact and Grants Awards Management Division, ONR Code 25 (or otherwise approved by Code 25) as contemplated in Federal Acquisition Regulation (FAR) 6.102(d)(2) and 35.016, and DoD's Other Transaction Guide for Prototypes Projects, USD(AT&L), OT Guide, Jan 2017. A formal Request for Proposals (RFP), solicitation, and/or additional information regarding this announcement will not be issued.

The Office of Naval Research (ONR) will not issue paper copies of this announcement. The ONR reserves the right to fund all, some, or none of the proposals received under this BAA. ONR provides no funding for direct reimbursement of proposal development costs. Technical and cost proposals (or any other material) submitted in response to this BAA will not be returned. It is the policy of ONR to treat all proposals submitted under this BAA as sensitive competitive information and to disclose their contents only for the purposes of evaluation.

A. Required Overview Content

1. Federal Awarding Agency Name

Office of Naval Research
One Liberty Center
875 N. Randolph Street
Arlington, VA 22203-1995

2. Funding Opportunity Title

Armored Reconnaissance Vehicle (ARV) Advanced Technology Development
Future Naval Capability

3. Announcement Type

Initial Announcement

4. Funding Opportunity Number

N00014-18-S-B002

5. Catalog of Federal Domestic Assistance (CFDA) Numbers

[12.300](#)

Title: Department of Defense (DOD), Department of the Navy, Office of Chief of Naval Research, Basic and Applied Scientific Research

6. Key Dates (See also Section II, D.4)

Anticipated Schedule of Events *		
Event	Date (MM/DD/YEAR)	Time (Local Eastern Time)
Pre-Proposal Conference/Industry Day	01/09/2018	
White Papers Due Date	01/19/2018	3:00 PM
Notification of Initial Navy Evaluations of White Papers*	02/02/2018	
Full Proposals Due Date	03/16/2018	3:00 PM
Notification of Selection for Award *	03/30/2018	
Contract Awards*	07/30/2018	
Kickoff Meeting*	08/16/2018	

***These dates are estimates as of the date of this announcement.**

7. North American Industry Classification System (NAICS) Code

The NAICS code for ***contracts*** under this announcement is 541715
with a small business size standard of 500 employees.

II. DETAILED INFORMATION ABOUT THE FUNDING OPPORTUNITY

A. Program Description

The Office of Naval Research (ONR) is interested in receiving white papers, then proposals, addressing the research, development, and integration of revolutionary technologies to inform the realm of the possible related to a notional next generation armored reconnaissance platform called the Armored Reconnaissance Vehicle (ARV). It is desired that a future ARV will be capable of fighting for information in an increasingly complex and contested environment and able to counter threats with greater reach and lethality. This Science and Technology (S&T) effort is a Future Naval Capability (FNC) program that will run from FY18 to mid-FY21.

The S&T program has been segmented into two Research Areas (RAs) which are each structured with a base period plus two (2) option periods.

The first Research Area will result in the development of advanced components and subsystems across ten (10) Technology Focus Areas (TFAs) that are further defined in Appendix 1. The second Research Area will include the development of novel concepts based on thorough analysis that is inclusive of modeling and simulation and whole system trade studies, mock up fabrication of intriguing concepts, and fabrication of full scale advanced technology demonstrators (one that is designed around a notional base capability and another that is revolutionary and "at the edge"). The platforms will be used to demonstrate the state of the art and to assess the potential capability and performance of advanced technologies and future concepts all to demonstrate the realm of the possible to inform the requirements development process and to engage Industry and Academia early in the process. This program is primarily researching a base capability for a notional ARV and it is not the intent to research all possible capabilities that will be resident on the platform in the future.

Offerors may submit white papers addressing either or both of the following Research Areas as desired. It is expected that multiple offerors will be selected in each.

- I. **RA1: Advanced Component and/or Subsystem Technology Research and Development**
 - a. **RA1 Base Period:** Preliminary Design
 - b. **RA1 Option 1 Period:** Detailed Design and Initial Prototype Build & Test
 - c. **RA1 Option 2 Period:** Refined Prototype Build & Test

- II. **RA2: Full System Concept Studies, Mockup Fabrication and Full System Technology Demonstrator Prototype Development**
 - a. **RA2 Base Period:** Full System Concept Studies
 - b. **RA2 Option 1A Period:** Advanced Concept Mockup Development
 - c. **RA2 Option 1B Period:** Full System Technology Demonstrator Prototype Development, Fabrication and Test & Demonstration Support

See Section II, B.3 (Funded Amount and Period of Performance) and Appendix 1 (Program Description) for additional details.

B. Federal Award Information

- 1. Eligibility for Competition.** Proposals for renewal or supplementation of existing projects are eligible to compete with applications for new Federal awards under this BAA.
- 2. Contracted Fundamental Research.** With regard to any restrictions on the conduct or outcome of work funded under this BAA, ONR will follow the guidance on and definition of “contracted fundamental research” as provided in the Under Secretary of Defense (Acquisition, Technology and Logistics) Memorandum of 24 May 2010.

As defined therein the definition of “contracted fundamental research,” in a DoD contractual context, includes research performed under grants and contracts that are (a) funded by Research, Development, Test and Evaluation Budget Activity 1 (Basic Research), whether performed by universities or industry or (b) funded by Budget Activity 2 (Applied Research) and performed on campus at a university. The research shall not be considered fundamental in those rare and exceptional circumstances where the applied research effort presents a high likelihood of disclosing performance characteristics of military systems or manufacturing technologies that are unique and critical to defense, and where agreement on restrictions have been recorded in the contract or grant.

Pursuant to DoD policy, research performed under grants and contracts that are a) funded by Budget Activity 2 (Applied Research) and **NOT** performed on-campus at a university or b) funded by Budget Activity 3 (Advanced Technology Development) does not meet the definition of “contracted fundamental research.” In conformance with the USD (AT&L) guidance and National Security Decision Directive 189, ONR will place no restriction on the conduct or reporting of unclassified “contracted fundamental research,” except as otherwise required by statute, regulation or executive order. For certain research projects, it may be possible that although the research being performed by the prime contractor is restricted research, a subcontractor may be conducting “contracted fundamental research.” In those cases, it is the *prime contractor’s responsibility* in the proposal to identify and describe the subcontracted unclassified research and include a statement confirming that the work has been scoped, negotiated, and determined to be fundamental research according to the prime contractor and research performer.

Normally, fundamental research is awarded under grants with universities and under contracts with industry. Non-fundamental research is normally awarded under contracts and may require restrictions during the conduct of the research and DoD pre-publication review of such research results due to subject matter sensitivity. Potential offerors should consult with the appropriate ONR Technical POCs to determine whether the proposed effort would constitute basic research, applied research or advanced research.

FAR Part 35 restricts the use of Broad Agency Announcements (BAAs), such as this, to the acquisition of basic and applied research and that portion of advanced technology development not related to the development of a specific system or hardware procurement. Contracts and grants and other assistance agreements made under BAAs are for scientific study and experimentation directed towards advancing the state of the art and increasing knowledge or understanding.

3. Funded Amount and Period of Performance

The Office of Naval Research is anticipating multiple awards for each of the listed Research Areas (RAs) and Technical Focus Areas (TFAs) further detailed in Appendix 1. Offerors are not limited to singular RAs or TFAs and may submit proposals addressing multiple areas.

RA1: Advanced Component and/or Subsystem Technology Research and Development

Each white paper and proposal addressing a TFA shall consist of a base period and two follow-on options.

RA1 Base Period: Preliminary Design

The base period will consist of multiple awards addressing some or all of the listed TFAs, amounting up to \$250K each for a six (6) month period of performance. The base period shall focus on developing technology design parameters, preliminary design work, and any initial modeling and simulation efforts to quantify how the technology will meet the goal of its target TFA(s). A technical report that includes an update on what will be accomplished in the option period is expected at least fifteen (15) days prior to the end of the base period detailing the expected benefits of the technology and the associated preliminary design information. This report will be used to aid in selecting the most promising technologies which will move forward into the option period.

Offerors may consider insertion of their technologies into either the “Base Variant” and/or “At the Edge” demonstrator depending on the level of technology maturity. Less mature technologies that may not be of sufficient maturity for insertion into the demonstrators are still of interest. In this case, offerors may propose a period of performance longer than what is listed for the base and option periods (see schedule).

RA1 Option 1 Period: Detailed Design and Initial Prototype Build & Test

During option 1 period, amounting up to \$500K for a six (6) month period of performance, it is expected that detailed design will occur, initial prototype(s) will be developed for any component characterization and/or durability testing, and updated technology benefits will be derived. A technical report that includes an update on what will be accomplished in the option period is expected at least fifteen (15) days prior to the end of the first option period. This report will be used to aid in selecting the most promising technologies which may move forward into the next period.

RA1 Option 2 Period: Refined Prototype Build & Test

During option 2 period, amounting up to \$500K for a six (6) month period of performance, focuses on producing a prototype device suitable for integration and eventual testing on an ARV or a surrogate platform that incorporates any design refinements based on the prior component testing. Additional testing may occur during this period if needed. In addition to the delivered prototype(s), a final report detailing activities that occurred during this option period is required at the end of the option.

RA2: Full System Concept Studies, Mockup Fabrication and/or Full System Demonstrator Development

White papers and eventually proposals should consist of a base period of four (4) months for the concept study and modeling and simulation effort and two option periods. Option Period 1A will be for a period of six (6) months for mockup development. Option Period 1B will be for a period of seventeen (17) or twenty-three (23) months for preliminary and detailed design, and fabrication of the “Base Variant” and “At the Edge” demonstrators respectively. Offerors can propose to either option, but not both.

RA2 Base Period: Full System Concept Studies

The base period will consist of multiple awards amounting up to \$400K each for a period of performance of four (4) months. The concept study should address multiple concepts including the “Base” variant and the “At the Edge” concepts. This effort should result in the delivery of a final report due fifteen (15) days prior to the end of the base period detailing the overall capabilities of the systems and individual subsystems (see technical focus areas), a section discussing the trades and compromises of the subsystems to result in the overall concepts, illustrations of the concept platforms, and an update on what will be accomplished in the selected option period; any models or simulations developed; and a presentation providing an overview of the concepts and results of the modeling and simulation efforts.

Concepts of interest may proceed directly into one of two possible follow-on options.

RA2 Option 1A Period: Advanced Concept Mockup Development

The mockup development option, amounting up to \$250K for a period of performance of four (4) months, is for basic static representations of the concepts or specific design elements of a concept developed for the purpose of visual display and demonstration and user assessment. Mockups can be developed out of low-cost materials such as Styrofoam, plywood, etc. and can potentially utilize 3D visualization environments allowing digital exploration of the concept. A final report detailing the activities accomplished during this period is due at the end of the option.

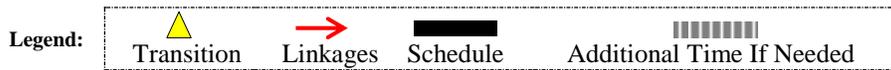
RA2 Option 1B Period: Full System Technology Demonstrator Platform Development, Fabrication and Test & Demonstration Support

It is desired that one (1) “Base Variant” and one (1) “At the Edge” Technology Demonstrator proposal will be selected for award. Offerors may elect to propose to either the ‘Base Variant’, “At the Edge”, or both demonstrators. The “Base Variant” demonstrator, being an operable platform that meets the intent of this solicitation and can withstand follow-on platform and subsystem testing will have an anticipated award up to \$10M. The “At the Edge” Technology Demonstrator, having an anticipated award up to \$15M, is expected to be inclusive of higher risk technologies and it is acceptable if some of the technologies have limited operability as long as there is a clear development path presented that would lead to full operability/capability as defined in Appendix 1, Section II(iii). Test and demonstration support is necessary to cover six (6) months of Government platform evaluation for each demonstrator.

For each demonstrator effort, a final report containing technical vehicle design information, details on the vehicle build process, any contractor test data and/or analysis, and vehicle specifications is due at the completion of this option.

Standard deliverables for each of the RAs, in addition to what is mentioned in the preceding descriptions, include monthly technical and financial progress reports, quarterly presentations, project reviews, briefing materials for each project review, and final reports. See Section F.2.vii for information on program meeting and review expectations.

Phase	FY18				FY19				FY20				FY21			
	Q1	Q2	Q3	Q4												
RA1 Base Phase: Advanced Technology Development Prelim. Design				█	█	█	█	█								
RA1 Option 1 Period: Detailed Design and Initial Prototype Build & Test								█	█	█	█	█				
RA1 Option 2 Period: Refined Prototype Build & Test													█	█	█	█
RA2 Base Phase: Full System Concept Studies				█	█	█	█	█								
RA2 Option 1A Period: Advanced Concept Mockup Development								█	█							
RA2 Option 1B Period: Full System Technology Demonstrator Platform Development, Fabrication and Test & Demonstration Support																
"Base Variant" Tech. Demonstrator Design, Fabrication, and Test																█
"At the Edge" Tech. Demonstrator Design, Fabrication, and Test																█



4. Instrument Type(s) -

Awards may take the form of contracts and other transaction agreements, as appropriate.

The following provides brief descriptions of potential instrument types:

- a. **Procurement Contract:** A legal instrument, consistent with 31 U.S.C. 6303, which reflects a relationship between the Federal Government and a state government, a local government, or other entity/contractor when the principal purpose of the instrument is to acquire property or services for the direct benefit or use of the Federal Government.
- b. **Other Transaction for Prototype (OTA):** A legal instrument, consistent with 10 U.S.C. 2371b, which may be used when the use of a contract, grant, or cooperative agreement is not feasible or appropriate for prototype projects directly

relevant to enhancing the mission effectiveness of military personnel and the supporting platforms, systems, components, or materials proposed to be acquired or developed by the Department of Defense, or for improvement of platforms, systems, components, or materials in use by the armed forces. The effort covered under an OTA shall not be duplicative of effort being conducted under an existing DoD program (please refer to the DoD “Other Transactions Guide for Prototype Projects” dated January 2017. This document along with other OTA resources may be accessed at the following link: <http://www.acq.osd.mil/dpap/cpic/cp/10USC2371bOTs.html>.

5. Model Contracts-

- Examples of model contracts can be found on the ONR website at the following link: <http://www.onr.navy.mil/Contracts-Grants/submit-proposal/contracts-proposal/contract-model-awards.aspx>.

The model contracts at the link above are only provided as examples. In the event of any conflict between these examples and current FAR, DFARS, MCARS, or ONR clauses, current FAR, DFARS, NMCARS, or ONR clauses will govern.

C. Eligibility Information

1. Eligible Applicants

- a. All responsible sources from academia, industry and the research community may submit proposals under this BAA. Historically Black Colleges and Universities (HBCUs) and Minority Institutions (MIs) are encouraged to submit proposals and join others in submitting proposals. However, no portion of this BAA will be set aside for Small Business or other socio-economic participation. All businesses both small and large are encouraged to submit proposals and compete for funding consideration.
- b. Federally Funded Research & 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 Offerors are allowed so long as such arrangements are permitted under the sponsoring agreement between the Government and the specific FFRDC.
- c. Navy laboratories, military universities and warfare centers as well as other Department of Defense and civilian agency laboratories are also not eligible to receive awards under this BAA and should not directly submit either white papers or full proposals in response to this BAA. If any such organization is interested in one or more of the programs described herein, the organization should contact an appropriate ONR Technical POC to discuss its area of interest. The various scientific divisions of ONR are identified at <http://www.onr.navy.mil/>. As with FFRDCs, these types of federal organizations may team with other eligible sources from academia and industry that are submitting proposals under this BAA.

- d. University Affiliated Research Centers (UARCs) are eligible to submit proposals under this BAA unless precluded from doing so by their Department of Defense UARC contract.
- e. Teams are also encouraged and may submit proposals in any and all areas. However, Offerors must be willing to cooperate and exchange software, data and other information in an integrated program with other contractors, as well as with system integrators, selected by ONR.

2. **Cost Sharing or Matching** - Cost sharing is not expected and will not be used as a factor during the merit review of any proposal hereunder. However, the Government may consider voluntary cost sharing if proposed.

D. Application and Submission Information

1. **Address to Request (Access) Application Package** - This BAA may be accessed from the sites below. Amendments, if any, to this BAA will be posted to these websites when they occur. Interested parties are encouraged to periodically check these websites for updates and amendments.

- a. FedBizOpps at www.fbo.gov
- b. ONR website at <http://www.onr.navy.mil>

2. **Content and Form of Application Submission**

a. General Information

Armored Reconnaissance Vehicle (ARV) S&T Brief to Industry:

ONR representatives will conduct an unclassified briefing for potential Offerors on Tuesday, January 9, 2018 at the Key Bridge Marriott located in Rosslyn, VA. The purpose of the meeting will be to provide potential Offerors with a better understanding of the scope of the Program and objectives of this BAA. The briefing will be held at 9:00 AM Local Eastern Time with check-in beginning at 7:30 AM. All attendees are required to pre-register by following the instructions at the following link: <https://www.onlineregistrationcenter.com/ARV-Industry-Day> by 3:00 PM Local Eastern Time on Thursday, January 4, 2017, if possible. After January 4, due to the recent holiday, we are now allowing on-site registration the morning of the 9 January event. If requested attendance exceeds capacity, it may be necessary to limit attendance, and organizations will be so notified. Attendance is limited to three (3) individuals per organization but up to six (6) are allowed, if necessary. Registration is now open to non-US citizens as well. Please check the above listed website near the event date for the agenda and updated information. Those not able to attend this briefing should also consult the above website for any Brief to Industry related information after the event.

White Papers: The due date for white papers is no later than 3:00 PM Local Eastern Time on Friday, January 19, 2018. White papers are to be submitted as a pdf file via

electronic mail (email) only to Mr. Jeff Bradel (jeff.bradel@navy.mil). If an Offeror does not submit a white paper before the specified due date and time, he/she is not eligible to participate in the remaining Full Proposal submission process and is not eligible for funding. Each white paper should state that it is submitted in response to this BAA and cite the particular sub-section of the Research Opportunity Description that the white paper is primarily addressing.

White Paper Evaluation/Notification: Evaluations of the white papers will be issued via email notification on or about Friday, February 2, 2018.

Full Proposals: The due date for receipt of Full Proposals is 3:00 PM (EDT) on Friday, March 16, 2018. It is anticipated that final selections will be made within two (2) weeks after full proposal submission. As soon as the final full proposal evaluation process is completed, PI's will be notified via email of their project's selection or non-selection for FY18 funding. Full proposals received after the published due date and time will not be considered for funding in FY18.

All proposal submissions will be protected from unauthorized disclosure in accordance with FAR Subpart 15.207, applicable law, and DoD/DoN regulations. Offerors are expected to appropriately mark each page of their submission that contains proprietary information.

IMPORTANT NOTE: Titles given to the White Papers/Full Proposals should be descriptive of the work they cover and not be merely a copy of the title of this solicitation.

b. Submission of Unclassified and Classified Proposals

- White Papers and Full Proposals submitted under this BAA are expected to be unclassified; however, classified proposals are permitted. If a classified proposal is submitted and selected for award, the resultant contract will be unclassified. An 'unclassified' Statement of Work (SOW) must accompany any classified proposal.
- Unclassified Proposal Instructions: Unclassified proposals shall be submitted in accordance with this Section.
- Special Instructions for Classified White Papers and Proposal: Classified proposals up to the SECRET level shall be submitted directly to the attention of ONR's Document Control Unit at the following address and marked in the following manner:

OUTSIDE ENVELOPE - (no classification marking):

Office of Naval Research
Attn: Document Control Unit
ONR Code 43

875 North Randolph Street
Arlington, VA 22203-1995

The inner wrapper of the classified White Paper and/or Full Proposal should be addressed to the attention of the cognizant TPOC, ONR Code 30 and marked in the following manner:

INNER ENVELOPE - (stamped with the overall classification of the material)

Program Name: Armored Reconnaissance Vehicle (ARV)
Advanced Technology Development
Office of Naval Research
ATTN: Jeff Bradel
ONR Code: 30
875 North Randolph Street
Arlington, VA 22203-1995

- For both classified and unclassified proposals, a non-proprietary unclassified version of the Statement of Work must also be submitted. Do not put proprietary data or markings in or on the Statement of Work. For proposals containing data that the offeror does not want disclosed to the public for any purpose, or used by the Government except for evaluation purposes, the contractor shall mark the title page with the following legend:

“This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed--in whole or in part--for any purpose other than to evaluate the proposal. If, however, a contract is awarded to this offeror as a result of--or in connection with-- the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government’s right to use information contained in this data if is obtained from another source without restriction. The data subject to this restriction are contained in (insert numbers or other identification of sheets).”

- Each sheet of data that the offeror wishes to restrict must be marked with the following legend:

“Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this proposal.”

c. White Paper Requirements.

i. White Paper Format

- Paper Size – 8.5 x 11 inch paper
- Margins – 1 inch
- Spacing –single-spaced
- Font – Times New Roman, 12 point
- Page limit– 5 pages.

ii. White Paper Submission. When e-mail submission is required (per the instructions below), the white paper must be a Microsoft Word 2010 compatible, or PDF format attachment to the email. There is an email size limit of 5MB per email.

- For ONR Only: Electronic (email) submissions should be sent to the attention of the TPOC at: jeff.bradel@navy.mil. The subject line of the email shall read: “N00014-18-S-B002” *White Paper Submission*”. Do not send ZIP files. Password protected files are discouraged.

iii. White Paper Content: White papers shall include the following:

FOR ALL WHITE PAPERS

- Cover Page: The Cover Page shall be labeled “WHITE PAPER” and shall include the BAA Number N00014-18-S-B002, “Armored Reconnaissance Vehicle (ARV) Advanced Technology Development”, Mr. Jeff Bradel, Code 30, (703) 588-2552, E-mail: jeff.bradel@navy.mil.
- Technical Concept: A description of the technology innovation and technical risk areas.
- Operational Naval Concept (where applicable) – A description of the project objectives, the concept of operation for the new capabilities to be delivered, and the expected operational performance improvements.
- Operational Utility Assessment Plan (where applicable) – A plan for demonstrating and evaluating the operational effectiveness of the Offeror’s proposed products or processes in field experiments and/or tests in a simulated environment.
- Rough Order of Magnitude (ROM) cost estimate.

d. Full Proposals: (See Appendix 2 for instructions.)

i. Instructions for Contracts and Other Transaction Agreements. (See Appendix 2)

3. Unique Entity Identifier and System for Award Management (SAM)

Unique Entity Identifier and System for Award Management (SAM) - All offerors submitting proposals or applications must:

- a. Be registered in the SAM prior to submission;
- b. Maintain an active SAM registration with current information at all times during which it has an active Federal award or an application under consideration by any agency; and
- c. Provide its DUNS number in each application or proposal it submits to the agency.

SAM may be accessed at <https://www.sam.gov/portal/public/SAM>

4. Submission Dates and Times -

(See Section I, paragraph A.6, Key Dates, for information)

Submission of Late Proposals (Applicable to White Papers and Full Proposals)

Any white paper, proposal, modification, or revision, that is received at the designated Government office after the exact time specified for receipt of proposals is “late” and will not be considered unless it is received before award is made, the contracting officer determines that accepting the late proposal would not unduly delay the acquisition and

- (a) If it was transmitted through an electronic commerce method authorized by the announcement, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of proposals; or
- (b) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of proposals and was under the Government’s control prior to the time set for receipt of proposals; or
- (c) It was the only proposal received.

However, a late modification of an otherwise timely and successful proposal that makes its terms more favorable to the Government will be considered at any time it is received and may be accepted.

Acceptable evidence to establish the time or receipt at the Government installation includes the time/date stamp of that installation on the proposal wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

If an emergency or unanticipated event interrupts normal Government processes so that proposals cannot be received at the Government office designated for receipt of proposals by the exact time specified in the announcement, and urgent Government requirements preclude amendment of the announcement closing date, the time specified for receipt of proposals will be deemed to be extended to the same time of day specified in the announcement on the first work day on which normal Government processes resume.

The contracting officer must promptly notify any offeror if its proposal, modifications, or revision was received late and must inform the offeror whether its proposal will be considered

5. Other Submission Requirements

a. Submission of Full Proposals for Contracts and Other Transaction Agreements

For ONR, full proposals should be submitted as follows:

Hard Copy Only:

Office of Naval Research
ATTN: Mr. Jeff Bradel
ONR Code: 30
875 North Randolph Street – Suite 1162
Arlington, VA 22203-1995

E. Application Review Information

1. Criteria

Awards under this BAA will be made in accordance with FAR 35.016(e) or 2 C.F.R 200. The primary basis for selecting proposals for acceptance will be technical merit, importance to agency programs, and fund availability. To the extent appropriate, cost realism and reasonableness will also be considered when selecting proposals. ONR reserves the right to request and require any additional information and documentation after it makes the type of award instrument determination. ONR reserves the right to remove Offerors from award consideration when the parties fail to reach agreement on award terms, conditions, and cost/price within a reasonable time, or when the Offeror fails to timely provide requested or required additional information.

Offerors' proposals will be evaluated against the following criteria:

- **Factor 1:** Overall scientific and technical merits of the proposal
- **Factor 2:** Overall innovativeness, and degree to which, the proposed concepts and ideas address the ARV desired capabilities, S&T Program Objectives, Research Areas (RA), and Technology Focus Areas (TFA). Soundness of the integration, testing, and

- validation approaches and criteria will also be considered
- Factor 3: The Offeror's capabilities, related experience, facilities, techniques or unique combinations of these which are integral factors for achieving the proposal objectives
 - Factor 4: The qualifications, capabilities, experience, and past performance of the proposed Principal Investigator (PI), team leader, and key personnel who are critical in achieving the proposal objectives
 - Factor 5: The realism of the proposed costs and availability of funds.

Overall, the technical factors combined (1 – 4 above) are more important than the cost factor. The technical factors 1 & 2 are of equal value and each is more important than factors 3 & 4, which are also of equal value. The degree of importance of cost will increase with the degree of equality of the proposals in relation to the other factors on which selection is to be based, or when the cost is so significantly high as to diminish the value of the proposal's technical superiority to the Government.

In addition, ONR highly encourages partnering among industry and academia and industry and Government with a view toward speeding the incorporation of new science and technology into fielded systems. Proposals that utilize industry-academic or industry-Government partnering which enhances the development of novel S&T advances, although not mandatory, are desired and will receive favorable consideration.

2. Review and Selection Process

- a. Proposals will not be evaluated against each other since they are not submitted in accordance with a common work statement. ONR's intent is to review proposals as soon as possible after they arrive; however, proposals may be reviewed periodically for administrative reasons.

The ultimate recommendation for award of proposals is made by ONR's scientific/technical community. Recommended proposals will then be forwarded to the ONR Contracts and Grant Awards Management office. Any notification received from ONR that indicates that the Offeror's full proposal has been recommended does not ultimately guarantee an award will be made. This notice indicates that the proposal has been selected in accordance with the evaluation criteria stated above and has been sent to the Contracting Department to conduct cost analysis, determine the offeror's responsibility, to confirm whether funds are available, and to take other relevant steps necessary prior to commencing negotiations with the offeror.

b. Commitment to Small Business - (For Contract Awards Only)

The Office of Naval Research is strongly committed to providing meaningful prime and subcontracting opportunities for small businesses, small disadvantaged businesses (SDBs), woman-owned small businesses (WOSBs), historically underutilized business zone (HUBZone) small businesses, veteran-owned small business (VOSBs), service disabled veteran-owned small businesses (SDVOSBs), historically black colleges and universities, and minority institutions, and other concerns subject to socioeconomic

considerations through its awards.

Businesses unfamiliar with doing business with the government and that require assistance may contact the state-specific Department of Defense (DoD) Procurement Technical Assistance Center (PTAC). DoD PTACs serve as a resource for businesses pursuing and performing under contracts with DoD, other federal agencies, state and local governments and with government prime contractors. Assistance provided by the PTACs is usually free of charge. PTAC support includes registration in systems such as SAM, identification of contract opportunities, understanding requirements and preparing and submitting proposals. The PTACs have a presence in each state, Puerto Rico and Guam.

To locate a local PTAC visit: <http://www.dla.mil/HQ/SmallBusiness/PTAC.aspx> or <http://www.aptac-us.org/new/>.

- 1) Subcontracting Plan - For proposed contract awards exceeding \$700,000, large businesses and non-profits (including educational institutions) shall provide a Subcontracting Plan (hereafter known as 'the Plan') that contains all elements required by FAR 19.704, FAR 52.219-9 and as supplemented by DFARS 252.219-7003.

NOTE: Small businesses are exempt from this requirement to submit a subcontracting plan.

The Plan must be submitted as an attachment to the "Proposal Checklist" and will not be included in the page count. If a company has a Master Subcontracting Plan, as described in FAR 19.701 or a Comprehensive Subcontracting Plan, as described in DFARS 219.702, a copy of the Plan shall also be submitted as an attachment to the "Proposal Checklist".

Plans will be reviewed for adequacy, ensuring that the required information, goals, and assurances are included. FAR 19.702 requires an apparent successful offeror to submit an acceptable Plan. If the apparent successful offeror fails to negotiate a Plan acceptable to the contracting officer within the time limit prescribed by the contracting officer, the offeror will be ineligible for award.

Offerors shall propose a plan that ensures small businesses (inclusive of SDBs, WOSBs, HUBZone, VOSBs and SDVOSBs) will have the maximum practicable opportunity to participate in contract performance consistent with efficient performance.

As a baseline, Offerors shall, to the best extent possible, propose realistic goals to ensure small business participation in accordance with the current or most recent fiscal year subcontracting goals found on the DoD Office of Small Business Program website at: <http://www.acq.osd.mil/osbp/>. If proposed goals are below the statutory requirements, then the offeror shall include in the Plan a viable written explanation as to why small businesses are unable to be utilized and what attempts were taken to

ensure that small business were given the opportunity to participate in the effort to the maximum extent practicable.

2) Small Business Participation Statement –

If subcontracting opportunities exist, all prime Offerors shall submit a Small Business Participation Statement regardless of size in accordance with DFARS 215.304 when receiving a contract for more than the simplified acquisition threshold (i.e., \$150,000). All offerors shall provide a statement of the extent of the offeror's commitment in providing meaningful subcontracting opportunities for small businesses and other concerns subject to socioeconomic considerations through its awards and must agree that small businesses, VOSBs, SDVOSBs, HUBZones, SDBs, and WOSBs concerns will have the maximum practicable opportunity to participate in contract performance consistent with efficient performance.

This assertion will be reviewed to ensure that it supports this policy by providing meaningful subcontracting opportunities. The statement should be submitted as an attachment to the "Proposal Checklist" and will not be included in the page count.

3) Subcontracting Resources -

Subcontracting to a prime contractor can be a good way to participate in the contracting process. The following is a list of potential resources that may assist in locating potential subcontracting partners/opportunities/resources:

- *Companies Participating in DoD Subcontracting Program Report
- *DAU Small Business Community of Practice (SB COP)
- *DefenseLink \geq \$7.0 M Award Notices
- *DoD OSBP Prime Contractors and Subcontractors with Subcontracting Plans
- *Dynamic Small Business Search
- *Electronic Subcontracting Reporting System (eSRS)
- *Federal Business Opportunities (FEDBIZOPPS)
- *Navy SBIR/STTR Search – Website or Brochure
- *DoD Procurement Technical Assistance Centers (PTAC)
- *Small Business Administration (SBA) Subcontracting Opportunities Directory
- *SBA Subnet

For a description and associated websites visit the ONR Office of Small Business webpage at:

<http://www.onr.navy.mil/Contracts-Grants/small-business.aspx>.

In accordance with FAR 5.206, the following entities may transmit a notice to the Government-wide Point of Entry (GPE) at www.fbo.gov to seek competition for subcontracts, to increase participation by qualified small businesses, VOSBs, SDVOSBs, HUBZones, SDBs, and WOSBs, and to meet established subcontracting plan goal as follows:

- (a) A contractor awarded a contract exceeding \$150,000 that is likely to result in the award of any subcontracts;
- (b) A subcontractor or supplier, at any tier, under a contract exceeding \$150,000, which has a subcontracting opportunity exceeding \$15,000.

The notices must describe:

- (a) The business opportunity;
- (b) Any prequalification requirements; and
- (c) Where to obtain technical data needed to respond to the requirement.

An example of a place in which prime contractors may post solicitations or sources sought notices for small business is the SBA SUB-Net.. The SUB-Net database provides a listing of subcontracting solicitations and opportunities posted by large prime contractors and other non-federal organizations.

c. Options

The Government will evaluate options for award purposes by adding the total cost for all options to the total cost for the basic requirement. Evaluation of options will not obligate the Government to exercise the options during contract or grant performance.

d. Evaluation Panel

Technical and cost proposals submitted under this BAA will be protected from unauthorized disclosure in accordance with FAR 3.104-4 and 15.207. The cognizant Program Officer and other Government scientific experts will perform the evaluation of technical proposals. Restrictive notices notwithstanding, one or more support contractors may be utilized as subject- matter-expert technical consultants. However, proposal selection and award decisions are solely the responsibility of Government personnel. Each support contractor's employee having access to technical and cost proposals submitted in response to this BAA will be required to sign the ONR Non-Disclosure Agreement (NDA) for Contractor Support prior to receipt of any proposal submissions. This NDA includes third-party beneficiary language giving the submitter of proprietary information a right of direct action against the contractor employee and/or his/her employer in the event that the NDA is violated.

3. Recipient Qualifications

- a. Applicable to Contracts and Other Transaction Agreements**
(See Appendix 2.)

F. Federal Award Administration Information

1. Federal Award Notices

a. Applicants whose proposals are recommended for award may be contacted by a Contract Specialist to discuss additional information required for award. This may include representations and certifications, revised budgets or budget explanations, certificate of current cost or pricing data, subcontracting plan for small businesses, and/or other information as applicable to the proposed award.

The notification e-mail must not be regarded as an authorization to commit or expend funds. The Government is not obligated to provide any funding until a Government Contracting Officer or Grants Officer, as applicable, signs the award document.

The award document signed by the Contracting Officer or Grants Officer is the official and authorizing award instrument.

b. Office of Naval Research (ONR) award/modification documents are only available via the Department of Defense (DoD) Electronic Document Access System (EDA) within the Wide Area WorkFlow e-Business Suite (<https://wawf.eb.mil/>).

EDA is a Web-based system that provides secure online access, storage and retrieval of awards and modifications to DoD employees and vendors.

ONR creates an award notification profile for every award.

For grants, the notification profile will use the email addresses from the Application for Federal Assistance, SF424, to notify the recipient of an award. ***ONR recommends that organizations provide a global business address for their entity in Field 5 (Application Information) of the SF424.*** ONR is using the following three email addresses entered by the grantee on the SF424 application to create the EDA notification profile:

- i. Applicant Information (Field 5 - Email)
- ii. Project Director / Principal Investigator (Field 14 - Email)
- iii. Authorized Representative (Field 19 - Email)

For all other awards, the notification profile will use the email address from the Business Point of Contact to notify the recipient of an award.

IMPORTANT: In some cases, EDA notifications are appearing in recipients' Junk Email folder. If you are experiencing issues receiving EDA notifications, please check your junk email. If found, please mark EDA notifications as "not junk."

If you do not currently have access to EDA, you may complete a self-registration request as a "Vendor" via <https://wawf.eb.mil/> following the steps below:

1. Click "Accept"

2. Click "Register" (top right)
3. Click "Agree"
4. In the "What type of user are you?" drop down, select "Vendor"
5. Select the systems you would like to access (iRAPT at a minimum)
6. Complete the User Profile and follow the site instructions

Allow five business days for your registration to be processed. EDA will notify you by email when your account is approved.

To access awards after your registration has been approved, log into <https://wawf.eb.mil/>, select "EDA", select either EDA location, Select "Contracts", select your search preference, enter the Contract Number (or, if applicable, enter the Grant Number in the Contract Number field), and select "View".

Registration questions may be directed to the EDA help desk toll free at 866-618-5988, commercial at 801-605-7095, or via email at disa.ogden.esd.mbx.cscassig@mail.mil (Subject: EDA Assistance).

2. **Administrative and National Policy Requirements**

a. **Applicable to All**

- i. Offerors should be aware of recent changes in export control laws. Offerors are responsible for ensuring compliance with all U.S. export control laws and regulations, including the International Traffic in Arms Regulation (ITAR)(22 CFR Parts 120 - 130) and Export Administration Regulation (EAR) (15 CFR Parts 730 – 774), as applicable. In some cases, developmental items funded by the Department of Defense are now included on the United States Munition List (USML) (22 CFR Part 121) and are therefore subject to ITAR jurisdiction. In other cases, items that were previously included on the USML have been moved to the EAR Commerce Control List (CCL). Offerors should address in their proposals whether ITAR or EAR restrictions apply to the work they are proposing to perform for ONR. The ITAR and EAR are available online at <http://www.ecfr.gov/cgi-bin/ECFR?page=browse>. Additional information regarding the President's Export Control Reform Initiative can be found at <http://export.gov/ecr/index.asp>.

Offerors must comply with all U.S. export control laws and regulations, including the ITAR and EAR, in the performance of any award or agreement resulting from this BAA. Offerors shall be responsible for obtaining any required licenses or other approvals, or license exemptions or exceptions if applicable, for exports of hardware, technical data, and software (including deemed exports), or for the provision of technical assistance.

- ii. *Security Classification:*

In order to facilitate intra-program collaboration and technology transfer, the

Government will attempt to enable technology developers to work at the unclassified level to the maximum extent possible. If access to classified material will be required at any point during performance, the Offeror must clearly identify such need in Section II, Block 11 of the Proposal Checklist . The Proposal Checklist can be found at <https://www.onr.navy.mil/Contracts-Grants/submit-proposal/contracts-proposal/cost-proposal>.

If it is determined that access to classified information will be required during the performance of an award, a Department of Defense (DD) Form 254 will be attached to the contract, and FAR 52.204-2 - Security Requirements will be incorporated into the contract.

iii. *Requirements Concerning Live Organisms:*

(1) Use of Animals: If animals are to be utilized in the research effort proposed, the Offeror must submit a Full Appendix or Abbreviated Appendix with supporting documentation (copies of Institutional Animal Care and Use Committee (IACUC) Approval, IACUC Approved Protocol, and most recent United States Department of Agriculture (USDA) Inspection Report) prior to award. For assistance with submission of animal research related documentation, contact the ONR Animal Use Administrator at (703) 696-4046. Guidance: <https://www.onr.navy.mil/About-ONR/compliance-protections/Research-Protections/animal-use>

(2) Use of Human Subjects in Research:

(a) You must protect the rights and welfare of individuals who participate as human subjects in research under this award and comply with the requirements of the Common Rule at 32 CFR part 219 and applicable provisions of DoD Instruction 3216.02, Protection of Human Subjects and Adherence to Ethical Standards in DoD-Supported Research (2011), the DON implementation of the human research protection program contained in SECNAVINST 3900.39D (or its replacement), 10 USC 980 “Limitation on Use of Humans as Experimental Subjects,” and when applicable, Food and Drug Administration (FDA) and other federal and state law and regulations.

(b) For proposals containing activities that include or may include “research involving human subjects” as defined in DoDI 3216.02, prior to award, the Offeror must submit documentation of:

(i) Approval from an Institutional Review Board (IRB) (IRB-approved research protocol, IRB- approved informed consent document, and other material they considered); proof of completed human research training (e.g., training certificate or institutional verification of training for the principal investigator, co-investigators); and the Offeror’s Department of Health and Human Services (DHHS)-issued Federal wide Assurance (FWA#),

(ii) Any claimed exemption under 32 CFR 219 101(b), including the category of exemption, supporting documentation considered by your institution in making the determination (e.g., protocol, data collection tools, advertisements, etc.). The documentation shall include a short rationale supporting the exemption determination. This documentation should be signed by the IRB Chair or IRB vice Chair, designated IRB administrator or official of the human research protection program.

(iii) Any determinations that the proposal does not contain activities that constitute research involving human subjects, including supporting documentation considered by your institution in making the determination. This documentation should be issued by the IRB Chair or IRB vice Chair, designated IRB administrator or official of the human research protection program.

(c) Documentation must be submitted to the ONR Human Research Protection Official (HRPO), by way of the ONR Program Officer. If the research is determined by the IRB to be greater than minimal risk, you also must provide the name and contact information for the independent research monitor and a written summary of the monitors' duties, authorities, and responsibilities as approved by the IRB. For assistance with submission of human subject research related documentation, contact the ONR Human Research Protection Official (HRPO) at (703) 696-4046.

(d) Contracts, orders, or grant awards and any subawards or modifications will include a statement indicating successful completion of the HRPO review. Research involving human subjects must not be commenced under any contract award or modification or any subcontract or grant subaward or modification until awardee receives notification from the Contracting or Grants Officer that the HRPO has approved the assurance as appropriate for the research under the award or modification and that the HRPO has reviewed the protocol and accepted the IRB approval or determination for compliance with Federal, DoD and DON research protection requirements. See, DFARS 252.235-7004. Guidance: <http://www.onr.navy.mil/About-ONR/compliance-protections/Research-Protections/Human-Subject-Research>.

iv. *Use of Recombinant DNA or Synthetic Nucleic Acid Molecules:* Proposals which call for experiments using recombinant or synthetic nucleic acid molecules must include documentation of compliance with NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules (NIH Guidelines), approval of the Institutional Biosafety Committee (IBC), and copies of the DHHS Approval of the IBC letter. Guidance: <https://www.onr.navy.mil/About-ONR/compliance-protections/Research-Protections/recombinant-or-synthetic-nucleic-acid-molecules>.

v. *Institutional Dual Use Research of Concern:* As of September 24, 2015, all institutions and United States Government (USG) funding agencies subject to the [United States Government Policy for Institutional Oversight of Life Sciences Dual](#)

Use Research of Concern must comply with all the requirements listed therein. If your research proposal directly involves certain biological agents or toxins, contact the cognizant Technical Point of Contact. U.S. Government Science, Safety, Security (S3) guidance may be found at <http://www.phe.gov/s3/dualuse>.

vi. *Department of Defense High Performance Computing Program*: The DoD High Performance Computing Program (HPCMP) furnishes the DoD S&T and RDT&E communities with use-access to very powerful high performance computing systems. Awardees of ONR contracts, grants, and other assistance instruments may be eligible to use HPCMP assets in support of their funded activities if ONR Program Officer 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/>.

vii. *Project Meetings and Reviews*: Individual program reviews between the ONR sponsor and the performer may be held as necessary. Program status reviews may also be held to provide a forum for reviews of the latest results from experiments and any other incremental progress towards the major demonstrations. These meetings will be held at various sites throughout the country. For costing purposes, offerors should assume that 40% of these meetings will be at or near ONR, Arlington VA and 60% at other locations such as the contractor/grantee's facility, other contractor's facility or government facilities. (This statement does not apply to international offerors submitting proposals to ONRG. International offerors should contact the cognizant ONRG Administrative Director (AD) for guidance prior to submitting a proposal.) Interim meetings are likely, but these will be accomplished via video telephone conferences, telephone conferences, or via web-based collaboration tools.

3. **Reporting**: If the Federal share of any Federal award may include more than \$500,000 over the period of performance, the post award reporting requirements, Award Term and Condition for Recipient Integrity and Performance Matters (2 CFR Part 200 Appendix XII), is applicable as follows:

A. Reporting of Matters Related to Recipient Integrity and Performance

1. **General Reporting Requirement**. If the total value of your currently active grants, cooperative agreements, and procurement contracts from all Federal awarding agencies exceeds \$10,000,000 for any period of time during the period of performance of this Federal award, then you as the recipient during that period of time must maintain the currency of information reported to the System for Award Management (SAM) that is made available in the designated integrity and performance system (currently the Federal Awardee Performance and Integrity Information System (FAPIIS)) about civil, criminal, or administrative proceedings described in paragraph 2 of this award term and condition. This is a statutory requirement under section 41 U.S.C. 2313. All information posted in the designated integrity and performance system on or after April 15, 2011, except past performance reviews required for Federal procurement contracts, will be publicly available.

2. Proceedings About Which You Must Report. Submit the information required about each proceeding that:

- a. Is in connection with the award or performance of a grant, cooperative agreement, or procurement contract from the Federal Government;
- b. Reached its final disposition during the most recent five year period; and
- c. Is one of the following:
 - (i) A criminal proceeding that resulted in a conviction, as defined in paragraph 5 of this award term and condition;
 - (ii) A civil proceeding that resulted in a finding of fault and liability and payment of a monetary fine, penalty, reimbursement, restitution, or damages of \$5,000 or more;
 - (iii) An administrative proceeding, as defined in paragraph 5. of this award term and condition, that resulted in a finding of fault and liability and your payment of either a monetary fine or penalty of \$5,000 or more or reimbursement, restitution, or damages in excess of \$100,000; or
 - (iv) Any other criminal, civil, or administrative proceeding if:
 - (i) It could have led to an outcome described in paragraph 2.c. (1), (2), or (3) of this award term and condition;
 - (ii) It had a different disposition arrived at by consent or compromise with an acknowledgment of fault on your part; and
 - (iii) The requirement in this award term and condition to disclose information about the proceeding does not conflict with applicable laws and regulations.

3. Reporting Procedures. Enter in the SAM Entity Management area the information that SAM requires about each proceeding described in paragraph 2 of this award term and condition. You do not need to submit the information a second time under assistance awards that you received if you already provided the information through SAM because you were required to do so under Federal procurement contracts that you were awarded.

4. Reporting Frequency. During any period of time when you are subject to the requirement in paragraph 1 of this award term and condition, you must report proceedings information through SAM for the most recent five year period, either to report new information about any proceeding(s) that you have not reported previously or affirm that there is no new information to report. Recipients that have Federal contract, grant, and cooperative agreement awards with a cumulative total value

greater than \$10,000,000 must disclose semiannually any information about the criminal, civil, and administrative proceedings.

5. Definitions. For purposes of this award term and condition:

a. Administrative proceeding means a non-judicial process that is adjudicatory in nature in order to make a determination of fault or liability (e.g., Securities and Exchange Commission Administrative proceedings, Civilian Board of Contract Appeals proceedings, and Armed Services Board of Contract Appeals proceedings). This includes proceedings at the Federal and State level but only in connection with performance of a Federal contract or grant. It does not include audits, site visits, corrective plans, or inspection of deliverables.

b. Conviction, for purposes of this award term and condition, means a judgment or conviction of a criminal offense by any court of competent jurisdiction, whether entered upon a verdict or a plea, and includes a conviction entered upon a plea of nolo contendere.

c. Total value of currently active grants, cooperative agreements, and procurement contracts includes—

(i) Only the Federal share of the funding under any Federal award with a recipient cost share or match; and

(ii) The value of all expected funding increments under a Federal award and options, even if not yet exercised.

b. Applicable to Contracts and Other Transaction Agreements
(See Appendix 2)

G. Federal Awarding Agency Contacts

1. Communications:

a. *All UNCLASSIFIED communications shall be submitted via e-mail to the Technical Point of Contact, Mr. Jeff Bradel, jeff.bradel@navy.mil with a copy to the designated Business Point of Contact, Mr. Philip Eisenhour at philip.eisenhour@navy.mil.*

b. *CLASSIFIED questions shall be handled through the ONR Security POC. Specifically, any entity wanting to ask a CLASSIFIED question shall send an UNCLASSIFIED email to the ONR Security POC with a copy to both the Technical POC and the Business POC stating that the entity would like to ask a CLASSIFIED question. DO NOT EMAIL ANY CLASSIFIED*

QUESTIONS. The Security POC will contact the entity and arrange for the CLASSIFIED question to be asked through a secure method of communication.

Comments or questions submitted should be concise and to the point, eliminating any unnecessary verbiage. In addition, the relevant part and paragraph of the Broad Agency Announcement (BAA) should be referenced. Questions submitted within 2 weeks of a deadline may not be answered, and the due date for submission of the white paper and/or full proposal will not be extended.

Questions of a business nature, and suggestions for improvement, should be submitted to:

Point of Contact Name: Mr. Philip Eisenhaur
Point of Contact Occupation Title: Sr. Contracts Specialist/Contracting Officer
Division Title: Contracts and Grant Awards Management
Division Code: ONR 025
Address: Office of Naval Research, 875 North Randolph Street, Suite 1469C, Arlington, VA 22203-1995
Email Address: philip.eisenhaur@navy.mil

Questions of a technical nature should be submitted to:

Point of Contact Name: Mr. Jeff Bradel
Point of Contact Occupation Title: Mobility Program Officer
Division Title: Expeditionary Maneuver Warfare & Combating Terrorism Science and Technology Department
Division Code: 30
Address: Office of Naval Research, 875 North Randolph Street, Suite 1162, Arlington, VA 22203-1995
Email Address: jeff.bradel@navy.mil

Questions of a Security nature should be submitted to:

Torri Woodfolk
Industrial Security Specialist
Office of Naval Research
Security Department, Code 43
One Liberty Center
875 North Randolph Street
Arlington, VA 22203-1995
Email Address: torri.powell@navy.mil

APPENDICES

APPENDIX 1 – DETAILED PROGRAM DESCRIPTION

Notional Armored Reconnaissance Vehicle (ARV) Vision/Background

The Armored Reconnaissance Vehicle (ARV) is envisioned as a possible next generation replacement for the U.S. Marine Corps' legacy Light Armored Vehicle (LAV) in support of the Light Armored Reconnaissance (LAR) battalions within the Marine Divisions. LAR Battalions have been designed to perform combined arms, all-weather, sustained reconnaissance and security missions in support of the Ground Combat Element and aim to reduce the "fog of war". Two of the fundamental roles of the LAR Battalion include *shaping the battlespace* by facilitating a commander's ability to maneuver and concentrate forces at the decisive point and *providing information* to commanders that yields a high degree of situational awareness.

Facing more modern threats, LAR Battalions will have to fight for information prior to being able to provide it and will have to shape an increasingly complex battlespace. LAR Battalions will operate in highly contested environments, countering threats that have greater reach and lethality. Next generation armored reconnaissance will require multiple and resilient means to sense and communicate, more capable lethality options to destroy heavily armored threats close-in and at range, and an associated enhanced protection posture to counter those threats.

Core to this next generation capability is the ARV which will be a modern combat vehicle system that balances competing capability demands to sense, shoot, move, communicate and must remain transportable as part of the naval expeditionary force. The ARV will not be an incremental upgrade/development to the legacy LAV and some of the capabilities envisioned include:

- Robust cross-country and on-road land mobility with shore-to-shore water mobility
- Full spectrum passive & active force protection and survivability
- Ability to deliver direct and indirect fires kinetically and non-kinetically
- A modern C4I suite that is a critical node in Intelligence, Surveillance and Reconnaissance (ISR) with tactical battle management systems
- Ability to enhance and extend the reconnaissance reach and provide persistent surveillance
- Incorporation of manned and un-manned teaming to extend the reach of the Light Armored Reconnaissance (LAR) battalion
- Similar levels of transportability to the legacy LAV which defines platform size and weight

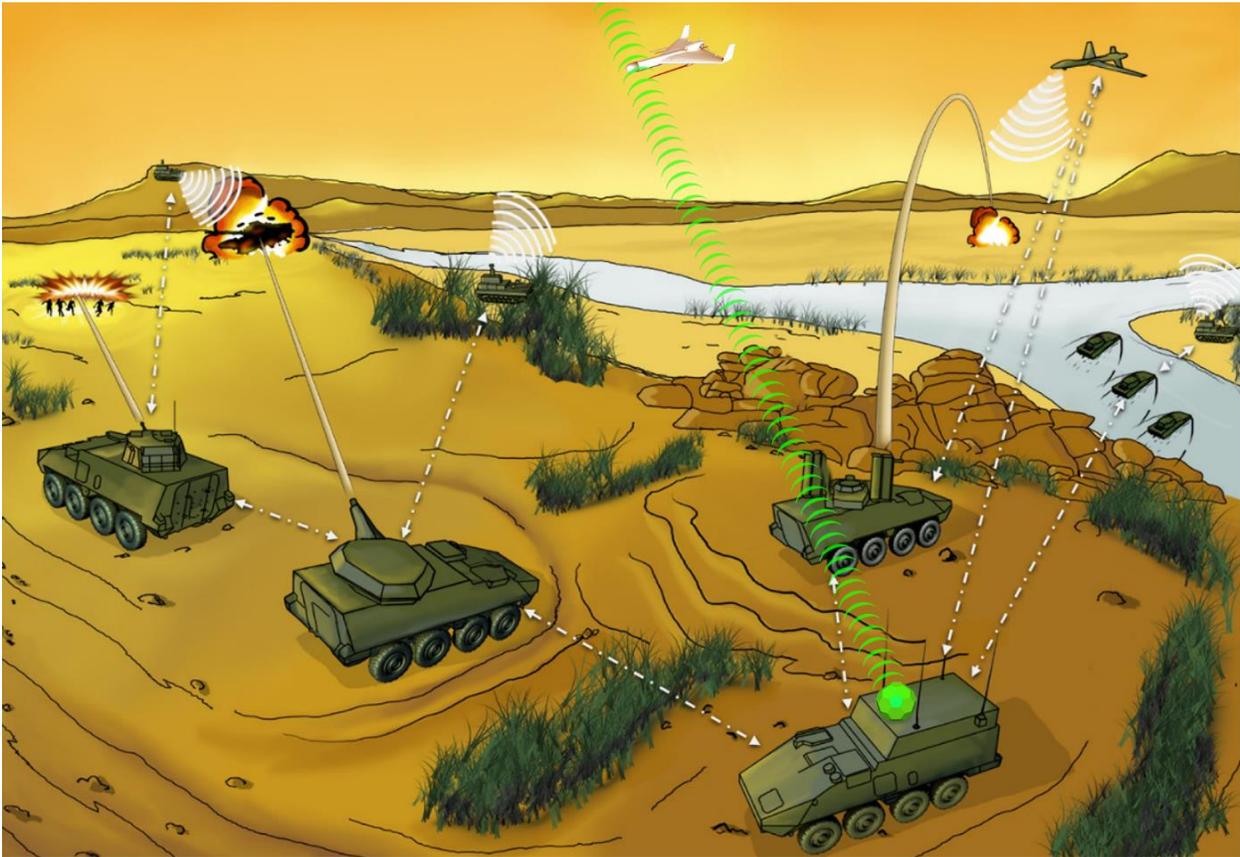


Figure 1: The ARV is the core capability that underpins the next generation armored reconnaissance capability concept. Above is a conceptual depiction of next generation armored reconnaissance capability.

Armored Reconnaissance Vehicle (ARV) Desired Capabilities

The ARV S&T effort will research a balanced set of payload, performance, and protection attributes for the ARV within the ground combat and tactical vehicle (GCTV) portfolio and will have sufficient design reserve, without performance degradation, to be readily adaptable over its service life. Below are envisioned base variant capabilities. Additional specificity is included in the S&T Program Objective section.

a. Payload

The ARV base variant will provide expeditionary protected mobility for a crew of two to three Marines and capacity to embark two to four Marines task organized to perform or support a mission. The crew and embarked scout team will be complemented with small-unmanned air and ground systems, to enhance mission effectiveness through manned-unmanned teaming while dismounted. Manned-unmanned teaming can also be expanded holistically to multiple ARV platforms (e.g. four platforms, two manned and two unmanned, operating in conjunction). ARV internal space will accommodate the full combat load and existence load of each occupant, including combat essential equipment of the embarked scout team, multiple days of supplies, and a suite of small unmanned air and ground systems capability of enhancing local security, conduct reconnaissance, detect IEDs, and relay communications in operations at extended ranges. ARV external storage will accommodate additional combat essential equipment and supplies.

b. Performance

In a Marine Corps mission profile, the ARV base variant will operate in an independent LAR formation at extended ranges to support reconnaissance and security missions or as part of a LAR formation supporting a task organized combat formation in offensive and defensive operations

i. Move

Similar to other combat vehicles in the GCTV fleet, the ARV will possess effective land mobility characteristics to meet the Marine Corps mission profile with robust cross-country capability and on-road performance to enable LAR operational reach. The ARV will have the operating range, speed, and maneuverability in nearly any terrain to enable independent LAR maneuver forward and to the flanks of a supported maneuver task force. The ARV will be capable of high-speed on-road operations with the JLTV and other wheeled platforms and keep pace with a ground combat element (GCE) armored task force. In urban environments, the ARV will be capable of maneuvering through obstacles and restrictive terrain that have historically limited armored platforms. To maintain operational tempo and expand the maneuver space, ARV crews will be capable of rapidly transitioning to water operations under armor to negotiate water obstacles with a shore-to-shore water mobility capability. The ARV will have sufficient water mobility performance to enter and exit littoral surf zones and steep riverbanks to negotiate light surf, bays, inlets, estuaries, and rivers.

ii. Sense

The ARV crew and embarked scout team will be capable of sensing and identifying weapons and targets through obscurants, beyond threat range, and beyond line of sight with a vehicle-mounted system and organic small-unmanned air and ground systems capability. The ARV will be capable of transmitting sensing and targeting information between the crew, the dismounted scout team, other ARV crews, and other MAGTF and joint sensing assets. The ARV will collect, process, and exploit information from organic and other MAGTF sensing assets – and disseminate it to subordinate units, LAR Battalion, and supported units.

iii. Shoot

The ARV base variant will be able to detect, recognize, identify, track, engage, and neutralize stationary and moving light armor and materiel targets at range with an automatic, rapid fire medium caliber cannon, capable of delivering accurate anti-materiel, anti-personnel, and anti-armor munitions in all light conditions, while on the move, and across the mission profile. The ARV will need to be able to defeat threats with organic heavy anti-armor capability from beyond the range of the enemy heavy armor. The ARV will need to effectively deliver precision guided munitions to defeat threats beyond the range of enemy direct fire and anti-tank guided munitions weapons. The means of delivering these effects include manned, optionally manned, and unmanned turret weapons stations.

iv. Communicate

The ARV will need to have the ability to operate in a highly contested anti-access/area denial (A2/AD) environment in which communications, navigation and sensing are

degraded. The ARV will be capable of providing timely, secure, high bandwidth-enabled intelligence products to the supported commander with a modern, resilient digital architecture to support expandability for a range of potential electronic requirements and have sufficient reserve or growth capacity. The ARV will be equipped with a command and control (C2) capability to enable fire control capability/capacity; secure voice, video and data exchanges; and operation within MAGTF and Joint C2 structures, to include battlefield situational awareness, at ranges to support deep operations, operations in GPS-degraded/denied environments, and air and ground control of unmanned systems beyond line of sight. The ARV will be equipped with a battle management system able to integrate multiple streams of onboard and off-board situational information to include targets, engagements by nearby vehicles, geolocation of attacking threats. A vehicle intercommunications system will facilitate communication, including the exchange of voice, video and data within the MAGTF C2 structure, among the crew and between the crew and its embarked scout team. Secure technologies may include wired and wireless technologies to enhance communication with dismounted troops.

v. Transportability

The ARV will be transportable in its original configuration by military and commercial trailers, railway, CH-53K heavy lift rotary wing aircraft, C-17 fixed wing aircraft, naval amphibious warfare ships and surface connectors, and military sealift command (MSC) and commercial ships. ARV design will permit integration with naval shipping and connectors that will sustain inter- and intra-theater transportation plans. Size and weight is expected to be similar in nature to the legacy LAV configuration to accommodate the transport of four (4) vehicles on a Landing Craft Air Cushion (LCAC) or its replacement, the Ship-to-Shore Connector (SSC).

vi. Sustainability

ARV operational availability, reliability, and maintainability will support the high degree of independence and autonomy required by LAR formations in conducting reconnaissance and security operations at extended ranges. The ARV will be energy efficient and outfitted with resilient systems to allow critical capabilities of the vehicle to degrade rather than terminate, such as an ability to perform self-diagnostics, incorporate automatic fire suppression systems, and perform assisted and self-recovery.

c. *Protection*

The ARV base variant will provide armor-protected mobility to its crew and embarked infantrymen with modern full spectrum active & passive force protection and system survivability technologies; and contain advanced, networked, multi-function electronic warfare capabilities that outpace threats in the electromagnetic spectrum in order to sense, track, and disrupt or spoof threat systems and enemy use of the electromagnetic spectrum.

i. Managing Signatures

To avoid threat detection and targeting, the static and dynamic operation of the ARV will possess inherent designs to minimize its visual, infrared, RF emissions, radar cross section, and acoustic signatures.

ii. Hardening Assets

ARV armor will protect the crew and embarked infantrymen against armor-piercing direct fire medium and large caliber threats up to heavy machine gun, indirect high explosive fragmentation, landmines, and IEDs. The ARV will be survivable against the broad range of threat effects of kinetic energy and directed energy weapon attacks without a total loss of mobility or system functionality. A resilient ARV communications network suite will be capable of operating in a contested cyberspace environment by preventing, mitigating, or recovering from threat offensive cyberspace attacks to deny, degrade, or destroy communications, information exchange, and navigation systems.

iii. Neutralizing Effects

The ARV will incorporate an equivalent level of current capability in chemical, biological, radiological, nuclear or high-yield explosive decontamination systems.

iv. Neutralizing Threats

The ARV will achieve standoff with active and passive protective systems to sense, orient, classify, track, and defeat incoming RPG, ATGM, and PGM threats with all-weather hard- and soft-kill capability; soft-kill capability will defeat or disrupt threat UAS in the counter-reconnaissance fight. Collective battle management systems will enable information exchange and coordinated action to counter incoming threats within a formation. The ARV crew will be able to defend itself against immediate threats in close proximity while on the move and under armor, notably in congested urban environments, with a remotely operated medium caliber machine gun or by other means.

v. Other protection-related technologies such as fire suppression systems, mine blast protective seats, and protected fuel storage will increase the survivability of the ARV and the protection of its occupants.

Science and Technology (S&T) Program Objectives

The Office of Naval Research (ONR) will plan and execute a robust S&T program to research *revolutionary* technologies and demonstrate the *realm of the possible* for the notional next generation Armored Reconnaissance Vehicle. The overall S&T effort is expected to begin in FY18 and be complete by mid-FY21.

Tasks include advanced technology research and development, development of novel concepts based on thorough analysis that is inclusive of modeling and simulation and whole system trade studies, mock up fabrication of intriguing concepts, and fabrication of full scale advanced technology demonstrators (one that is designed around a notional base capability and another that is revolutionary and "at the edge"). The platforms will be used to demonstrate the state of the art and to assess the potential capability and performance of advanced technologies and future concepts.

This program is primarily researching a base capability for a notional ARV. It is not the intent to research all possible capabilities that will be resident in the future.

The S&T program has been segmented into two (2) Research Areas (RAs) which are each structured with a base period plus options. The first research area will result in the development of advanced component & subsystems across ten (10) Technology Focus Areas (TFAs) and the second will focus on the development of advanced concepts, and possibly mockups and full scale technology demonstrator platforms as outlined below:

- I. **RA1: Advanced Component and/or Subsystem Technology Research and Development**
 - a. **RA1 Base Period:** Preliminary Design
 - b. **RA1 Option 1 Period:** Detailed Design and Initial Prototype Build & Test
 - c. **RA1 Option 2 Period:** Refined Prototype Build & Test

- II. **RA2: Full System Concept Studies, Mockup Fabrication and Full System Technology Demonstrator Prototype Development**
 - a. **RA2 Base Period:** Full System Concept Studies
 - b. **RA2 Option 1A Period:** Advanced Concept Mockup Development
 - c. **RA2 Option 1B Period:** Full System Technology Demonstrator Prototype Development, Fabrication and Test & Demonstration Support

Additional detail can be found below describing each of the Research Areas (RAs) and their subsequent options:

I. **RA1: Advanced Component and/or Subsystem Technology Research and Development**

This research area is intended for research and development of new and revolutionary technologies to provide the ARV with the greatest advantage in performing its mission. Technologies of interest are those ranging from a Technology Readiness Level (TRL) of 2 – 5 with expected maturation up to as high as 6. Technologies should propose to test and evaluate their technology in a lab environment or on a government furnished legacy platform such as the LAV. The offeror of those technologies that are of sufficient maturity to have a fully-functioning prototype as soon as possible but no later than the end of Q1FY20, should provide an estimate for their technology to be integrated into one of the technology demonstrators being developed under RA2. Technologies of insufficient maturity at the stated timeframe would still be used to help define ARV program requirements and could ultimately be integrated in the future.

i. **RA1 Base Period: Preliminary Design**

The base period will consist of multiple awards addressing some or all of the Technology Focus Areas (TFAs) listed below. The base period focuses on developing technology design parameters, preliminary design work, and any initial modeling and simulation efforts to quantify how the technology will meet the goal of its target TFAs.

ii. **RA1 Option 1 Period: Detailed Design and Initial Prototype Build & Test**

In the first option period it is expected that detailed design will occur, initial prototype(s) will be developed for any component characterization and/or durability testing, and updated technology benefits will be derived.

iii. **RA1 Option 2 Period: Refined Prototype Build & Test**

The second option period focuses on producing a prototype device suitable for integration and eventual testing on an ARV or a surrogate platform that incorporates any design refinements based on the prior component testing. Additional testing can occur during this period if needed.

The following *Technology Focus Areas (TFAs)* further define specific technologies of interest for the ARV:

a. **TFA1: Propulsion**

1. *Goal*: Increase platform power density and utilize novel propulsion methods to reduce platform size and space allocated to propulsion systems allowing additional platform capability in other areas. Research electric power generation systems that can accommodate electric drive and high-power weapon systems and payloads.
2. *Research Ideas*: Electric drive, increased power dense engines, on-board vehicle power generation, fuel consumption reduction, etc.

b. **TFA2: Mobility**

1. *Goal*: Increase the platform's ability to traverse complex terrain while maintaining a greater operational tempo through mobility systems that utilize on-board and remote sensors and data to aid the operator in successful mission completion.
2. *Research Ideas*: Advanced suspensions allowing greater terrain traversal and off-road speed, smart tire and track concepts, predictive and adaptive off-road mobility systems, etc.

c. **TFA3: Autonomy/Manned-Unmanned Teaming**

1. *Goal*: Provide a vehicle organic capability to perform mission specific behaviors utilizing input from various advanced sensors; provide an ARV vehicle capable of transitioning from manned operation by a crew of marines to an un-manned operation as a semi-autonomous wingman; ability to coordinate autonomous behaviors across a team of heterogeneous unmanned and manned systems; extend reconnaissance reach and surveillance persistence with organic platform-launched UAS capable of long-range/long-duration flight; unmanned systems capable of secure RSTA information transmission from beyond line of sight; and ability to remotely control fires and autonomously maneuver individual ARV platforms to provide broader coverage within an area of operations, increase unit lethality, enable more rapid and accurate engagements, feign friendly intentions as decoys, and offset the signature risk to ARV crews.

2. *Research Ideas*: Advanced autonomous sensors, perception, and collaborative behavior technologies; unmanned wingman; unmanned lead vehicle concepts; etc.
- d. **TFA4: Weapons**
1. *Goal*: Provide mission reconfigurable weapons packages, including kinetic and non-kinetic systems to address a multitude of threats to be engaged from a single or multiple heterogeneous vehicles; improved lethal and non-lethal fires capable of delivering effects at extended ranges; anti-armor capability with increased accuracy and lethality; and advanced, networked, and multi-function electronic warfare capability.
 2. *Research Ideas*: Directed energy weapons, anti-armor weapons, electronic warfare systems, modular/reconfigurable weapon systems, counter-UAS weapons, etc.
- e. **TFA5: Force Protection/Survivability**
1. *Goal*: Integrated active and passive protective systems capable of detecting and neutralizing a variety of threats at sufficient distances to enable the survivability of the crew. Minimize armor weight to protect occupants against armor-piercing direct fire medium and large caliber threats up to heavy machine gun, indirect high explosive fragmentation, landmines, and IEDs, to maximize transportability, off-road mobility, and buoyancy in the water. Be survivable against the broad range of threat effects of kinetic energy and directed energy weapon attacks without a total loss of mobility or system functionality.
 2. *Research Ideas*: Active protection systems, counter tactical surveillance and targeting systems, slew-to-cue, lightweight armor materials, improved signature management across the EM spectrum, overmatch mitigation, fire suppression systems, damage resistant tires, blast protective seats, resilient fuel systems, CBR protection, DEW/laser protection, EMP protection, low-observable technologies to reduce the vehicle passive and emitted signatures, etc.
- f. **TFA6: Vehicle Architectures**
1. *Goal*: Cyber-secure and electronic-warfare protected advanced vehicle architectures that inherently enable advanced communication protocols and power distribution & management to accommodate modularity for future advanced payloads (weapons, APS, EW packages, etc.).
 2. *Research Ideas*: Concepts allowing maximum mission re-configurability, cyber-secure control systems, etc.
- g. **TFA7: Logistics**
1. *Goal*: Substantially reduce the logistics footprint of platforms through incorporation of fuel efficient propulsion systems and increase operational availability through the utilization of condition based maintenance systems and resilient systems allowing degradation in performance rather than a loss in capability.
 2. *Research Ideas*: CBM+, resilient systems, platform health self-diagnosis, etc.
- h. **TFA8: Sensors**

1. *Goal:* Sense and identify weapons and targets through obscurants, beyond threat range, and beyond line of sight with a vehicle-mounted system and organic small-unmanned air and ground systems capability; transmit sensing and targeting information between the crew, the dismounted scout team, other ARV crews, and other MAGTF and joint sensing assets; and sensing in the deep area that will enable rapidly coordinated and executed fire missions against adversary personnel, armor, equipment, and facilities.
 2. *Research Ideas:* Sensors capable of operating in degraded vision environments and which expand sensing capacity of LAR unit over a broader operating area, sensors to increase local area SA such as see through armor technology and target motion indicator/sensing capability, etc.
- i. **TFA9: Communication**
1. *Goal:* Redundant, resilient, and rapidly upgradeable joint-interoperable communications that enable the command and control of LAR elements to support armored reconnaissance and security operations at extended ranges and beyond line of sight; communications capabilities able to operate in jammed/denied EM environments; and protected, high-bandwidth information exchanges, ingest and disseminate information such as target quality data, high-resolution imagery, and video at near real-time speeds utilizing multiple waveforms.
 2. *Research Ideas:* Resilient communication systems, high bandwidth and secure communication, etc.
- j. **TFA10: Battle Management System**
1. *Goal:* A combat vehicle mounted system that fuses sensors, communications, command and control applications, and weapons to form tactical level coordinated battle teams that perform their tasks with greater aggregate effectiveness. Supports the requirements of battalion-and-below tactical units, meeting their operational needs, including direct fire engagement & maneuver, indirect fire support, intelligence and logistics.
 2. *Research Ideas:* Battle Management System and related subsystems.

II. **RA2: Full System Concept Studies, Mockup Fabrication, and/or Full System Demonstrator Development**

Offerors will propose a concept study that may include one, but not both, of the follow-on options described in RA2 Option 1A and RA2 Option 1B. The government may elect to fund the base period and then proceed directly to either of the two option periods upon completion of the concept study.

i. **RA2 Base Period: Full System Concept Studies**

Develop novel concepts for both a revolutionary “At the Edge” design and the “Base Variant” that addresses the vision contained within this document.

- a. All concepts must be based off of an analytical and systems-based approach that explores the various potential sub-systems and technologies and trades their potential capability gains against the impact to the platform and other sub-systems.
- b. Utilize modeling & simulation and analytical tools to the maximum extent

possible when assessing trades between platform sub-systems and overall predicted performance/capabilities.

c. Illustrations of concept platforms and sub-systems must be provided.

ii. **RA2 Option 1A Period: Advanced Concept Mockup Development**

The performer shall develop a mockup of unique systems, subsystems, or features of their design to better illustrate the concept proposed. The mockup is not expected to be operable. Mockups can be either:

- a. Fabricated from low-cost materials such as Styrofoam, plywood, etc. and/or
- b. Digital visualizations utilizing immersive 3D systems to visualize platform and arrangements. Development of 3D visualization systems are not in scope and performers should utilize established tools and capabilities.

iii. **RA2 Option 1B Period: Full System Technology Demonstrator Platform Prototype Development, Fabrication and Test & Demonstration Support**

Offerors may elect to propose to either the ‘Base Variant’, ‘At the Edge’, or both demonstrators. Technology demonstrators should be designed to the maximum extent practical with a modular open systems approach to enable future development, enhance competition, innovation, and interoperability. Developed technology demonstrators will be tested and evaluated and aid in the refinement of future program requirements. Offerors will need to provide appropriate support personnel and material to support government test and demonstration events for a duration of 6 months.

a. **“Base Variant” Technology Demonstrator Prototype Design and Fabrication**

1. Concepts and approaches that define the set of advanced technologies and capabilities to push the state of the art given certain timeframes and price points.
2. For the purposes of this S&T effort only, assume a notional Average Manufacturing Unit Cost (AMUC) of \$6.0M per platform for 500 units with a projected Initial Operating Capability (IOC) in 2027.
3. The platform must be an operational system capable of being driven over terrain of various roughness to collect mobility data and to assess overall performance. The system and components must have sufficient durability to withstand testing in a relevant environment with a Technology Readiness Level of approximately 6.

b. **“At the Edge” Revolutionary Technology Demonstrator Prototype Design and Fabrication**

1. Concepts and approaches that define the far-term future edge of an integrated set of generation-after-next-technologies to push the upper limits of capability and performance.
2. There are not any constraints on unit cost for this platform and there is no defined IOC. This effort will inform future technology insertions and upgrades.
3. The platform is to be operational but is not expected to be designed with the durability necessary to withstand sustained operations in relevant terrain environments. A TRL of approximately 5 is acceptable.

Note: Sampling of desired Technology Demonstrator Capabilities:

It is envisioned that the technology demonstrators will be designed based on the initial concept study task. The base technology demonstrator should exhibit as many of the following as possible which will be assessed during follow-on system testing and will aid in defining future threshold requirements. The revolutionary technology demonstrator will exceed many of the below capabilities and will aid in defining future objective requirements:

- a. A self-healing, cyber-safe electrical and data distribution architecture with the capability for expansion to support future capability insertion and ability to be easily updated as architecture components become obsolete (keeping pace with Moore's law).
- b. Power pack (engine/transmission) that yields maximum horsepower per ton capability while yielding significant fuel efficiency. Threshold would support 70% off road and 30% on road mobility even with eventual weight growth.
- c. Power generation growth that powers all systems on vehicle with a 25% power buffer and supports an eventual 100% growth within 10 years for power & distribution, data distribution & processing, and memory storage without performance degradation.
- d. Direct fire, underbody, and top attack vehicle protection.
- e. Energy attenuation seats that support IED protection for a space constrained lightweight vehicle.
- f. Water mobility sufficient to support shore to shore operations.
- g. Vehicle volume and weight that enables four ARVs to be transported on current and future versions of LCAC. For the purposes of the S&T effort, all designs should not exceed a GVW of 29,600 lbs. but should accommodate a 25% weight growth margin up to a GVW of 37,000 lbs.
- h. Suspension and structural capacity to support 25% weight growth margin over the life of the vehicle while ensuring ride quality (both on road and off road).
- i. Firepower equivalent to minimum of 30mm direct fire primary weapon and will support future growth to high caliber weapons.
- j. All-weather, full spectrum operations for both vehicle mobility and individual crew vision to support superior reconnaissance capability over any currently fielded lightly armored vehicle.
- k. A C4I architecture that aligns with MAGTF communication requirements that supports four-year technology refresh updates. This architecture will support secure voice, video, and data exchanges in GPS denied environments.
- l. Interfaces to support the transportation, deployment, retrieval, data transmission, recharging, and control of Unmanned Aerial Systems (UASs) and Unmanned Ground Vehicles (UGVs).
- m. Modularity to allow flexibility for the insertion of emerging technologies and also current and future multi-mission payloads.
- n. Manned/Unmanned teaming operations through the incorporation of robotics and autonomy.

APPENDIX 2 - REQUIREMENTS APPLICABLE TO CONTRACTS AND OTHER TRANSACTION AGREEMENTS

D. Application and Submission Information

1. Content and Form of Application Submission

(e) Full Proposals:

ii. Instructions for Contracts and Other Transaction Agreements

Proposal Package:

The following six documents with attachments comprise a complete proposal package:

- (1) Proposal Checklist (.pdf)
- (2) Technical Proposal Template (.pdf)
- (3) Cost Proposal Spreadsheet (Excel)
- (4) Adequacy Checklist for Pre Award Audit (SF 1408) (as applicable)
- (5) Stand-alone non-proprietary Statement of Work (SOW) in Word
- (6) Representations and Certifications

NOTE: The electronic file name for all documents submitted under this BAA must not exceed 68 characters in length, including the file name extension.

Items 1 – 5 above are located at: <http://www.onr.navy.mil/Contracts-Grants/submit-proposal/contracts-proposal/>. All have instructions imbedded into them that will assist in completing the documents. Also, both the Proposal Checklist and the Cost Proposal Spreadsheet require completion of cost-related information. Please note that attachments can be incorporated into the Proposal Checklist.

For item 6, above, ONR contract specific representations and certifications are located at <http://www.onr.navy.mil/en/Contracts-Grants/submit-proposal/contracts-proposal.aspx>

The format requirements for attachments are as follows:

- Paper Size- 8.5 x 11 inch paper
- Margins – 1 inch
- Spacing- single or double spaced
- Font- Times New Roman, 12 point

Offerors responding to this BAA must submit a separate list of all technical data or computer software that will be furnished to the Government with other than unlimited rights. The Government will assume unlimited rights if offerors fail to identify any intellectual property restrictions in their proposals. Include all proprietary claims to results, prototypes, and/or deliverables. If no restrictions are intended, then the offeror should state “NONE.”

For proposals below the simplified acquisition threshold (less than or equal to \$150K), the Technical Proposal Template and Proposal Checklist documents, and the Cost Proposal Spreadsheet are required. Purchase orders can also contain options, as long as the total amount of the base and all options does not exceed \$150K.

For proposed subcontracts or inter-organizational transfers over \$150,000, Offerors must provide a separate fully completed Cost Proposal Spreadsheet in support of the proposed costs. This spreadsheet, along with supporting documentation, must be provided either in a sealed envelope with the prime's proposal or via e-mail directly to both the Program Officer and the Business Point of Contact at the same time the prime proposal is submitted. The e-mail should identify the proposal title, the prime Offeror and that the attached proposal is a subcontract, and should include a description of the effort to be performed by the subcontractor.

Offerors should submit an appropriate number of hard copies as discussed with the cognizant Program Officer of their proposal package.

The electronic copy must be submitted in a secure, pdf-compatible format, except for the electronic file of the Cost Proposal Spreadsheet which must be submitted in a Microsoft Excel 2010 compatible format and the Statement of Work Template which must be submitted in Microsoft Word format. All attachments to any required proposal documents must be submitted in a secure, pdf-compatible format.

The secure pdf-compatible format is intended to prevent unauthorized editing of the proposal prior to any award. A password should not be required for opening the proposal document, but the Government must have the ability to print and copy text, images, and other content. Should an Offeror amend its proposal, the amended proposal should be submitted following the same hard and electronic copy guidance applicable to the original proposal.

Any proposed options that are identified in the Technical Proposal Template or Proposal Checklist documents, but are not fully priced out in the Cost Proposal Spreadsheet, will not be included in any resulting contract, cooperative agreement, or other transaction. If proposing options, they **must** be separately priced and separate spreadsheets should be provided for the base period and each option. In addition to providing summary by period of performance (base and any options), the Contractor is also responsible for providing a breakdown of cost for each task identified in the Statement of Work. The sum of all costs by task worksheets **MUST** equal the total cost summary.

The electronic submission of the Excel spreadsheet should be in a "useable condition" to aid the Government with its evaluation. The term "useable condition" indicates that the spreadsheet should visibly include and separately identify within each appropriate cell any and all inputs, formulas, calculations, etc. The Offeror should not provide "value only spreadsheets" similar to a hard copy.

Fixed Fees on ONR Contracts: The Government Objective is set in accordance with the DFARS 215.404-71. See the below table for range and normal values:

Contract Risk Factor	Contract Type	Assigned Value (Normal range)	Normal Value
Technical (1)		3% - 7% (2)	5%
Management/Cost Control (1)		3% - 7% (2)	5%
Contract Type Risk	Firm Fixed Price	2% - 6% (3)	3% - 5% (4)
Contract Type Risk	Cost Plus Fixed Fee	0% - 1% (2)	0.5%

- (1) Assign a weight (percentage) to each element according to its input to the total performance risk. The total of the two weights equal 100%
- (2) Assign a weighting score relative to the Risk Factor.
- (3) Depends on the specific Contract Type (With/without financing, performance-based payments, and/or progress payments).
- (4) Depends on the specific Contract Type.

Technology Incentive (TI) is rarely utilized at ONR, because the contracts issued by ONR typically are not eligible for TI (See DFARS 215.404-71-2(c) (2)). Any consideration of TI requires strong and convincing justification in the proposal, which are then subject to negotiation and determination of a fair and reasonable fee, within the context of the specific award.

Typically the range of fee is 5% to 7.5% on an ONR awarded contract.

E. Application Review Information

3. Recipient Qualifications

b. Contract Proposals:

i. Contracts shall be awarded to responsible prospective contractors only. See FAR 9.104-1 for a listing of the general standards against which an applicant will be assessed to determine responsibility.

Applicants are requested to provide information with proposal submission to assist the Contracting Officer's evaluation of responsibility

ii. FAPIIS (Federal Awardee Performance and Integrity Information System) will be checked prior to making an award. The web address is:

<https://www.fapiis.gov/fapiis/index.action>

The applicant representing the entity may comment in this system on any information about the entity that a federal government official entered. The information in FAPIIS will be used in making a judgment about the entity's integrity, business ethics, and

record of performance under Federal awards that may affect the official's determination that the applicant is qualified to receive an award.

F. Federal Award Administration Information

2. Administrative and National Policy Requirements

c. Applicable to Contracts and Other Transaction Agreements. (See Appendix 2).

i. Applies to Contracts (and may be applicable, as revised, to Other Transactions):

(1) Government Property/Government Furnished Equipment (GFE) and Facilities: Government research facilities and operational military units are available and should be considered as potential government-furnished equipment/facilities. These facilities and resources are of high value and some are in constant demand by multiple programs. It is unlikely that all facilities would be used for any one specific program. The use of these facilities and resources will be negotiated as the program unfolds. Offerors should indicate in the Proposal Checklist, Section II, Blocks 8 and 9, which of these facilities are critical for the project's success.

(2) Use of Arms, Ammunition and Explosives:

Safety

The Offeror is required to be in compliance with DoD manual 4145.26-M, *DoD Contractor's Safety Manual for Ammunition and Explosives* if ammunitions and/or explosives are to be utilized under the proposed research effort. (See DFARS 223.370-5 and DFARS 252.223-7002) If ammunitions and/or explosives (A&E) are to be utilized under the proposed research effort, the Government requires a preaward safety survey in accordance with DFARS PGI 223.370-4(C)(iv) entitled *Preaward survey*.

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

Security

If arms, ammunition or explosives (AA&E) are to be utilized under the proposed research effort, the Government requires a preaward security survey. (See DoD manual 5100.76-M, dated April 17, 2012, *Physical Security of Sensitive Conventional Arms, Ammunition and Explosives*, Enclosure 2, paragraph 2.a.)

If AA&E are to be utilized under the proposed research effort, the Government may require the Contractor to have perimeter fencing around the place of performance in

accordance with DoD 5100.76-M dated April 17, 2012, Enclosure 5, paragraph 2.a.

If AA&E are to be utilized under the proposed research effort, the Offeror is required to provide a written copy of the Offeror's AA&E accountability procedures in accordance with DoD 5100.76-M. If the Offeror is required to provide written AA&E accountability procedures, the Offeror should provide the respective procedures with its proposal submission. See DoD 5100.76-M dated April 17, 2012, Enclosure 9, paragraph 9.

(3) System for Award Management (SAM):

FAR 52.204-7 System for Award Management and FAR 52.204-13 System for Award Management Maintenance are incorporated into this BAA, and FAR 52.204-13 will be incorporated in all awards.

(4) Employment Eligibility Verification (E-verify):

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

(5) Conflicts of Interest:

(a) Disclosure. An offeror shall state in its proposal whether it is aware of any information bearing on the existence of any actual or potential organizational conflict of interest (OCI) as defined in FAR 2.101 and as further discussed in FAR Subpart 9.5 as to itself and any proposed subcontractors, partners, consultants or other affiliates. Offerors performing systems engineering and technical assistance (SETA) for ONR are considered to have an OCI that may not be susceptible to mitigation. See ONR's Statement of Policy on OCIs, which can be found at the following address: <http://www.onr.navy.mil/en/About-ONR/compliance-protections/Organizational-Conflicts-Interest.aspx>

The nondisclosure or misrepresentation of an interest creating an OCI may result in the disqualification of an offeror for award, or if such nondisclosure or misrepresentation is discovered after award, the Government may terminate the contract for default, recommend that the contractor be disqualified from subsequent related contracts, or be subject to such other remedial actions as may be permitted or provided by law (see 18 U.S.C. § 1001 and 31 U.S.C. § 3802(a)(2)). Therefore, offerors should interpret the requirements of this section broadly.

An offeror who does not provide support services to ONR or concludes no actual or potential OCI exists shall include the following statement in its proposal: "I [NAME] as an authorized negotiator on behalf of [NAME OF OFFEROR] certify that **NO** actual or potential organizational conflict of interest (OCI) exists under [BAA NUMBER]. I understand that the failure to disclose the existence of actual or potential OCI shall result in the offeror not being considered for award."

An offeror who does provide support services to ONR or is aware circumstances exist that may result in the appearance that it may have an unfair competitive advantage shall submit the following with its proposal:

- (i) The name of the entity the offeror, its subcontractors, partners, consultants or affiliates supports.
- (ii) The number of the contract, subcontract, or agreement that creates the actual or potential OCI. If ONR did not award the contract or agreement, provide a copy of the document. If ONR awarded the contract, provide the name of the technical point of contact.
- (iii) A description of the actual or potential OCI. The statement must describe in a concise manner all relevant facts concerning any past, present or currently planned interest (financial, contractual, organizational, or otherwise) relating to the work to be performed hereunder and bearing on whether the offeror has a possible organizational conflict of interest with respect to (1) impartial, technically sound, and unbiased assessments, recommendations, or evaluations, or (2) being given an unfair competitive advantage. If relevant, offerors shall address the personal conflicts of their employees.
- (iv) A Mitigation Plan. Offerors should refer to FAR Subpart 9.5 for policies and procedures for avoiding, neutralizing, or mitigating organizational conflicts of interest.
- (v) A concluding statement as follows: "I [NAME] as an authorized negotiator on behalf of [NAME OF OFFEROR] certify that I have, to the best of my knowledge and belief, disclosed all actual or potential organizational conflicts of interest (OCI) under [BAA NUMBER]. I understand that the failure to disclose the existence of an actual or potential OCI shall result in the offeror not being considered for award."

(b) OCI Mitigation Plan Contents. At a minimum, a Mitigation Plan shall:

- (i) Provide organizational charts showing the offeror's (and, as appropriate, those of its subcontractors, partners, consultants, and affiliates) structure as it relates to performance under the contract awarded under this BAA and all contracts and agreements relevant to the OCI, highlighting those elements that create the actual or apparent OCI.
- (ii) Demonstrate how the elements that create the actual or apparent OCI will be isolated from the resources that will perform work under the contract awarded under this BAA.
- (iii) Provide information showing whether the organizational elements that will perform work under the contract awarded under this BAA will be geographically or physically separated from the elements that create the actual or apparent OCI.
- (iv) For each contract or agreement relevant to the OCI, describe the process for reassigning personnel, including those belonging to subcontractors, partners, consultants, and affiliates, from one organization to another. Include restrictions that apply.

(v) For each contract or agreement relevant to the OCI, describe the any controls, including nondisclosure agreements, that are exercised over the future employment of departing employees as it relates to the OCI.

(vi) For each contract or agreement relevant to the OCI, describe any OCI training the employees are offered or required to attend, along with the timing (before or after starting work on a government contract), frequency, length, and content of such training.

(vii) Provide evidence of facts and circumstances that the offeror asserts mitigate or address the concerns related to the actual or potential OCI.

(c) Review. The Contracting Officer will review an offeror’s certifications, statements, and OCI Mitigation Plan (if applicable) submitted and may require additional relevant information from an offeror. All such information and any other relevant information will be used by the Contracting Officer to determine whether an award to the offeror may create an OCI. If found to exist, the Government may: (1) impose appropriate conditions which avoid such conflict, (2) disqualify the offeror, (3) determine that it is otherwise in the best interest of the Government to award a contract to the offeror and include appropriate conditions mitigating such conflict in the award, or (4) seek a waiver. If the Contracting Officer determines that an actual or significant potential conflict of interest exists that cannot reasonably be avoided, neutralized or mitigated, the offeror will be ineligible for award. If accepted, the Mitigation Plan shall become part of the contract.

An offeror who has refused to disclose the information or make the certification required by this BAA concerning an actual or potential OCI shall be disqualified from consideration for award.

6. FAR / DFARS Provisions/Clauses: For purposes of illustration and not of limitation, the following provisions and clauses may be applicable to ONR contracts:

#	Provision/Clause
52.204-7	System for Award Management
52.204-13	System for Award Management Maintenance
52.215-16	Facilities Capital Cost of Money
52.215-22	Limitations on Pass Through Charges - Identification of Subcontract Effort
52.216-1	Type of Contract
52.216-27	Single or Multiple Awards
52.217-4	Evaluation of Options Exercised at time of Contract Award
52.217-5	Evaluation of Options
52.217-9	Option to Extend the term of the Contract
52.222-24	Preaward On-Site Equal Opportunity Compliance Evaluation (Applies if exceeds \$10M)
52.226-2	Historically Black College or University and Minority Institution Representation
52.230-7	Proposal Disclosure - Cost Accounting Practice Changes

52.232-15	Progress Payments not included
52.233-2	Service of Protest
52.252-1	Solicitation Provisions Incorporated by Reference
52.252-3	Alterations in Solicitation
52.252-5	Authorized Deviations in Provisions
252.203-7005	Representation Relating to Compensation of Former DoD Officials
252.204-7004	Alternate A, System for Award Management
252.204-7008	Compliance with Safeguarding Covered Defense Information Controls (DEC 2015)
252.204-7012	Safeguarding Covered Defense Information and Cyber Incident Reporting (DEC 2015)
252.215-7003	Requirements for Submission of Data Other than Certified Cost or Pricing Data - Canadian Commercial Corporation
252.219-7000	Advancing Small Business Growth

(a) Combating Trafficking in Persons: FAR Clause 52.222-50 will be incorporated in all awards.

(b) Certification Regarding Trafficking in Persons Compliance Plan:

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

(c) Updates of Information regarding Responsibility Matters: FAR clause 52.209-9, Updates of Publicly Available Information Regarding Responsibility Matter, will be included in all contracts valued at \$550,000 where the contractor has current active Federal contracts and grants with total value greater than \$10,000,000.

(7) Production and Testing of Prototypes

ONR may modify a contract awarded under this BAA to add a contract line item or contract option for the provision of advanced component development or for the delivery of initial or additional prototype units. However, such a contract addition shall be subject to the limitations contained in Section 819 of the National Defense Authorization Act (NDAA) for Fiscal Year 2010, as modified in Section 811 of the NDAA for Fiscal Year 2015.

i. Applies to Other Transaction Agreements only:

(1) Federal Funding Accountability and Transparency Act of 2006:

The Federal Funding Accountability and Transparency Act of 2006 (Public Law 109-282), as amended by Section 6202 of Public Law 110-252 and expanded by the Digital Accountability and Transparency Act of 2014 (Public Law 113-101), requires that all agencies establish requirements for recipients reporting information on subawards and executive total compensation as codified in 2 CFR Part 170. Any company, non-profit agency or university that applies for financial assistance (either grants, cooperative agreements or TIA's other transaction agreements) as either a prime or sub-recipient under this BAA must provide information in its proposal that describes the necessary processes and systems in place to comply with the reporting requirements identified in 2 CFR Part 170 Appendix A. Entities are required to meet reporting requirements unless an exception or exemption applies. Please refer to 2 CFR Part 170, including Appendix A, for a detailed explanation of the requirements, exceptions, and exemptions.