

NOTICE OF FUNDING OPPORTUNITY



DEPARTMENT OF DEFENSE BILATERAL ACADEMIC RESEARCH INITIATIVE (BARI) PROGRAM RESEARCH COUNCIL OF FINLAND (AKA)

ANNOUNCEMENT TYPE:	Initial Announcement	
FUNDING OPPORTUNITY NUMBER:	HQ003424NFOEASD01	
ASSISTANCE LISTING:	12.630 Basic, Applied, and Advanced Research in Science and Engineering	
KEY DATES:	Questions Regarding White Papers*	15 January 2024 1600 Eastern Time
	White Papers Due	12 February 2024 1600 Eastern Time
	Invitation to Submit Full Proposal**	15 March 2024
	Questions Regarding Full Proposals*	15 April 2024 1600 Eastern Time
	Full Proposals Due	3 May 2024 1600 Eastern Time
	Award Notification (Tentative)**	7 June 2024
	Estimated Award Date (USA)**	1 October 2024
	Estimated Award Date (Finland)**	1 October 2024

ANTICIPATED FUNDING PURPOSE: This NFO is for the Bilateral Academic Research Initiative Pilot Program (BARI), which is jointly sponsored by the US Department of Defense (DoD), Office of the Secretary of Defense (OSD), and the Research Council of Finland (AKA). The BARI program addresses high risk basic research as an international collaboration. This research should attempt to provide the scientific foundation towards the design and development of future and ubiquitous information networks that rely on extreme-scale devices, distributed intelligence, and network complexity, and include cognitive and social concepts to inform the technological choices. The goal of this program is to produce significant scientific breakthroughs and knowledge that will be critical steps in enabling revolutions in communication and information technology on a large scale.

* Questions submitted after the Q&A deadline as noted in the table above may not be answered. The due date for submission of the application will not be extended.

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

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I. PROGRAM DESCRIPTION

A. SHORT DESCRIPTION OF FUNDING OPPORTUNITY

This Notice of Funding Opportunity (NFO) is issued under 10 U.S.C. 4001, which provides the authority for issuing a grant under this announcement for basic research. The definitions of basic research may be found at 32 CFR 22.105.

This NFO is for the Bilateral Academic Research Initiative Pilot Program (BARI), which is jointly sponsored by the US Office of the Under-Secretary of Defense for Research & Engineering (OUSD(R&E)), and the Research Council of Finland (AKA). The BARI program addresses high risk basic research as an international collaboration. This research should attempt to provide the scientific foundation towards the design and development of future and ubiquitous information networks that rely on extreme-scale devices, distributed intelligence, and network complexity, and include cognitive and social concepts to inform the technological choices. The goal of this program is to produce significant scientific breakthroughs and knowledge that will be critical steps in enabling revolutions in communication and information technology on a large scale. Proposals focused on specific devices, network architectures or components already at or past the design stage are beyond the scope of this NFO.

The Department of Defense (DoD) agencies and AKA involved in this program reserve the right to select one or none of the proposals submitted in response to this announcement for award. The participating DoD agencies and AKA will provide no funding for direct reimbursement of proposal development costs.

The program focus is *Future Information Architecture for IoT*.

B. BACKGROUND

The BARI program supports basic research in science and engineering stemming from interactive collaborative efforts between U.S. institutions of higher education (IHEs) and Finnish research institutions, thereafter also referred to as "U.S. universities and Finnish research institutions". It is important to note that the education of students via the granting of doctorate degrees for research conducted under this program is an important consideration and an evaluation criterion. Any proposal which does not include a strong educational component would not be considered acceptable.

The program is focused on international collaborative research efforts where teams from the United States and Finland combine unique skillsets and approaches to provide rapid advances in scientific areas of mutual interest to the U.S. DoD and AKA. In this edition of the BARI program, the focus is on information architecture for internet of things (IoT). Each proposal submitted under this NFO will be a joint US/FINLAND proposal, with a US research team and a Finland research team collaborating on a research solution.

A single proposal will be submitted by the US research team, for the two research teams of the US universities and Finnish research institutions. The single proposal must show that the proposed research is collaborative and interactive between the respective teams, and must provide a distinct budget for the US research team (in US Dollars) and a distinct budget for the Finland research team (in Euros). The two principal investigators (PIs), one belonging to the US research team and one belonging to the Finland research team, will work with the US and Finland technical points of contact (TPOCs) listed in Section VII to ensure the research stays fundamental and collaborative during its progress.

C. PROGRAM DESCRIPTION AND OBJECTIVES

We are looking for collaborative research, between teams that must include US universities and Finnish research institutions. The level of effort, especially in terms of team size, and time spent on the research, should be approximately balanced, within the constraints of a rational work plan that best addresses the topic's scientific questions and the maximum yearly budget allowed. A single technical proposal must be submitted that includes a discussion of how the bi-national teams will work together. However, OUSDR&E will fund the US academic team and AKA will fund the Finland team through separate grant funding mechanisms. Each will have their own applicable terms and conditions. See Section IX for Finland specific requirements.

The BARI Program competition is for research within the purview of the following topic:

Future Information Architecture for IoT

Background:

Future communication frameworks aim to provide an extreme-scale network of devices with highly variable capabilities. The nodes of this network may include satellites, data centers, vehicles, personal devices (mobile phones), all the way down to miniaturized and embedded sensors – in every building, every room and even inside human bodies (e.g., for health monitoring). The design and implementation of this hyper-network includes a number of challenges that span multiple disciplines.

The first is technology, broadly including materials, power, control, and manufacturing. Communication links (edges of the network) will call upon a wide-ranging spectrum of bandwidth capability, from RF, THz to optical. Links may be interrupted (e.g., obstructions, outages, intermittent infrastructure) and the devices must find alternative paths, or even leverage the physical environment (e.g., signal-reflecting walls). The node devices, may have to switch frequencies or even technologies used to access different parts of the spectrum, depending on the environmental conditions (e.g., weather). Because of SWAP, this is an especially difficult proposition for very small devices. Along with this physical agility, there is a need for agile decision-making, optimization, and learning. This implies a mathematical and software requirement (see below), but also the technical capability

to do so: computing technology, especially embedded neuromorphic, low-power devices. Power management, including wireless transfer and energy scavenging, is another important consideration.

The second challenge is the need for embedded intelligence. As mentioned above, the environment can be random and changing in unpredictable ways. All real-life conditions and scenarios cannot reasonably be predicted and simulated off-line, prior to deployment. Wireless devices will also be mobile, and must be tracked, and/or their trajectories predicted, even in complex (e.g., urban) environments, and may be destroyed or experience failure. Thus, the devices should *learn* these environmental conditions and adapt their strategies, even at the time of initial implementation. This requires a very high level of embedded, as well as collective intelligence, starting from the detection (sensing) or inference of the situation, to distributed optimization, and decision-making. The network of devices will be extremely heterogeneous (different types, spectrum, power, location, and even vendors – eventually implying the need for standardization). Both the amount of data exchanged and the nature of the information must be tailored to the conditions, including environment, status and capabilities of device and network, importance and urgency, etc. This implies a need for highly efficient methods, not just for data compression/expansion, as well as its *security*, but *information* exchange, leveraging data structure, learned features, and embedded reasoning.

The third challenge concerns the human interaction and the socio-economics. How will this pervasive information network be used, and what are the consequences? We already know how ubiquitous mobile communication devices have changed human behavior. What would be the impact of devices that are omni-present, yet undetectable by other means? What are the optimal ways of interacting with such a network to prevent information overload, distracted behavior, information security and privacy? The vast, multi-scale nature of future IoT networks also presents an implementation challenge. How will the devices be manufactured and deployed? How would they be maintained or replaced? Would the devices be bio-degradable? The optimization of human interaction and the design of a socio-economic implementation strategy are necessary, as they are strongly coupled to the technology itself and the design choices. A holistic view is needed to address sustainability from cultural, societal, environmental, and commercial perspectives. This is a challenging techno-social problem, coupling technology design and societal response, which should be pursued in a synchronous and iterative fashion, to prevent the pursuit of technology solutions that are either not accepted, or that create dangerous conditions.

Research Areas:

This topic is broad, and each item could be considered a significant research project on its own. Yet, their combination is both necessary and impactful, and the goal of this research program is to bring multiple disciplines together to lay the *scientific foundation* towards the rational design of future communication and sensor networks – future G. To that effect, the following research areas are considered essential:

- Materials and devices for communication. What are the solutions for rapid and extreme bandwidth adaptability? What new materials can be leveraged to efficiently generate and transduce signals at extremely small scales and engineering footprints? For example, meta-materials are likely to play an essential role, but which? Would 2D heterostructures be called for? Would these materials and devices be non-toxic? Easily degraded? Easily manufactured at scale?
- Network science and embedded intelligence. The same devices must be able to perform basic computation and make decisions. An interrupted signal should lead to intelligent choices by the device, e.g., to re-establish contact by other means, or wait to conserve energy. The network should establish itself, blending essential and primitive information from the devices and highly complex, meta-structured collective knowledge – calling for novel approaches to multiscale data representation and fusion, distributed decision-making in a stochastic environment, and compatibility with resource constraints.
- Human interactions at scale. Along with the technology choices, the framework design must consider how humans will interact with the network. For example, what is the optimal approach to “displaying” the information? What can guarantee privacy in a multi-agent environment? How are the users choosing not to interact, or selectively interact with the network? How would they collectively interact with the network? These questions lead to refinement of the technological approaches.

Objectives:

This research opportunity calls for multi-disciplinary teams that address basic research questions in the broad areas listed above. The teams should provide in their proposal a tentative vision of what the communication framework could be like, or a choice of approaches that would be investigated together in order to achieve a holistic view of that framework. The proposal should focus on basic and fundamental research, to lay down the foundation for future technology development and implementation via applied research, rather than focus on a specific and complete framework design, which is likely to be premature.

We emphasize that this program aims at the fundamental science enabling future revolutionary technologies and capabilities, towards designs that can be much smaller than existing wireless communication devices, with ubiquitous presence, and multi-functional capabilities. It is a co-design problem that includes hardware, networks, software and intelligence, sensors and communication, human behavior and social considerations. While prior and current research on distributed and agile networks can be leveraged, this program calls for very significant and fundamental advances over the state of the art, and simple continuations of prior and existing research efforts will not be worthy of consideration.

Basic Research Requirements:

This initiative will only fund basic (fundamental) and openly published research that has the aim of advancing scientific knowledge. Basic research, as defined within [DoD 7000.14-R, Vol. 2B, Ch. 5](#), “is systematic study directed toward greater knowledge or

understanding of the fundamental aspects of phenomena and observable facts without specific applications towards processes or products in mind.”

D. AUTHORIZATION

The authorization to make awards under this funding opportunity is [10 U.S.C. 4001 Research and Development Projects](#).

E. LEGAL REQUIREMENTS

The assistance awarded under this NFO will be governed by the [DoD Research and Development \(R&D\) General Terms and Conditions](#) in effect at the time of award. These terms and conditions are incorporated by reference in this NFO.

II. FEDERAL AWARD INFORMATION

The DOD will award one grant to the lead institution of the US research team which will only fund research performed by that US research team. The AKA will make a corresponding award to fund performance under the selected proposal by the Finland research team. Information regarding the Finland Research Team award can be found in Section IX.

A. ANTICIPATED PERIOD OF PERFORMANCE

The grant awarded under this NFO will have a four (4) year period of performance.

B. INSTRUMENT TYPE

The type of funding instrument selected by the Government is planned to be a grant. A grant is defined as a legal instrument that, consistent with [31 U.S.C. 6304](#), is used to enter into a relationship:

- a. The principal purpose of which is to transfer a thing of value to the recipient to carry out a public purpose of support or stimulation authorized by a law or the United States, rather than to acquire property or services for the Federal Government’s direct benefit or use.
- b. In which substantial involvement is not expected between the Federal Government and the recipient when carrying out the activity contemplated by the grant.

No fee or profit is allowed.

C. AWARD INFORMATION

The total funding from the US DoD available for the grant awarded from this NFO is estimated to be \$4,000,000.00, supporting 2-4 funded faculty researchers. The US DoD funding will be used exclusively for research performed by the US research team. The grant awarded from this NFO is contingent on availability of funds, the specific topic, and the scope of the proposed work. For the US research team, expected annual funding will not exceed \$1,000,000.00 per year.

The total funding from the Finland AKA is not to exceed €3,000,000.00, and it is expected that a single award will be issued for a consortium of investigators,

including 2-5 parties. The Finland AKA funding will be used exclusively for research performed by the Finland research team.

III. ELIGIBILITY INFORMATION

A. ELIGIBLE APPLICANTS

As a result of this BARI competition, a program of international collaboration between the United States and Finland will be created. Consequently, the proposal will include two research teams, one of which will be from the U.S. and the other from Finland. Accordingly, the BARI competition is open only to teams comprised of at least one (1) US institution of Higher Education (IHE) as defined in [20 U.S.C. 1001](#) with a degree granting program in science or engineering (US University); and at least one (1) Finnish Research Institution via which the funding is paid. In addition to a doctoral degree, the Finland PI of the proposed project must also have other significant scientific merits.

US DoD Laboratories and Federally Funded Research and Development Centers (FFRDCs) are not allowed to receive funds directly or via sub-awards.

B. COST SHARING OR MATCHING

Cost sharing or matching is not required under this NFO and is not an evaluation factor.

C. CONFLICT OF INTEREST: GENERAL REQUIREMENTS FOR DISCLOSURE

Within the white paper submissions, organizations must disclose any potential or actual scientific or non-scientific conflict of interest(s). Organizations must also disclose any potential or actual conflict(s) of interest for any identified sub-recipient included in the application. Depending on the circumstances, the Government may request a conflict-of-interest mitigation plan. Government approval is required for all mitigation plans. Offerors with conflicts of interest that are not mitigated will be ineligible for award.

D. MARKING PROPRIETARY OR CONFIDENTIAL INFORMATION

The DoD will make every effort to protect any proprietary information submitted in white papers and full applications. Any proprietary information included in application materials must be identified. Prospective proposers should be aware, however, that under the Freedom of Information Act (FOIA) requirements, proprietary information contained in white papers and applications (marked or unmarked) may still potentially be subject to release.

It is the prospective applicants' responsibility to notify the DoD of applications containing proprietary information and to identify the relevant portions of their applications that require protection. The entire application (or portions thereof) without protective markings or otherwise identified as requiring protection will be considered to be furnished voluntarily to the US DoD without restriction and will be treated as such for all purposes.

It is the intent of the US DoD and Finland AKA to treat all white papers and full applications as proprietary information before the award and to disclose their contents to reviewers only for the purpose of evaluation.

IV. APPLICATION AND SUBMISSION INFORMATION

A. INTRODUCTION ON SUBMISSIONS

The announced application due date and procedures for submission will be strictly observed. Applications received after the established time and date above will not be considered; the burden of timely delivery (including requests for delivery confirmation) is on the Applicant.

When applicable, the application due date is determined by the timestamp and date of the Applicant's submission on [Grants.gov](https://www.Grants.gov). Applications received after the due date and timestamp will not be considered.

It is essential that all applications be complete and accurate at the time of submission. OUSD(R&E) and AKA (hereafter referred to as "Funders") reserve the right to reject applications that are incomplete or that do not comply with submission instructions. All documentation submitted under this NFO is unclassified.

This opportunity is for joint research teams from US universities and Finnish research institutions. The Funders provide no direction as to the composition of the teams, besides the evaluation criteria listed in Section V of this document. To facilitate the building of collaborative teams, the Funders encourage the use of the following website that is designed to facilitate networking between researchers and interested parties. Therein, researchers can upload brief pre-recorded briefings or presentations, as well as other documents such as CV and journal articles and papers, to highlight research interests and capabilities that they deem relevant to this opportunity. The website can be freely accessed and potential bidders can use it to establish connections and discuss potential collaborations. Note that all material uploaded to the website can be viewed by all registered parties, and the Funders are not responsible for credential verification or information security. The applicants must therefore make their own judgments on the level of information detail they want to make public, and are encouraged to pursue more detailed discussions via other, private channels. The website will remain active and open from the date of publication of this opportunity until the deadline for white paper submission. Instructions and further details are provided online – see <https://www.basicresearchXchange.org>.

B. TWO STAGES OF SUBMISSIONS

The BARI application process is conducted in two stages:

- Stage One – White Paper submission (via email to technical point of contact)
 - Deadline: 12 February 2024, 1600 Eastern Time
- Stage Two – Full Application submission (via Grants.gov)
 - Deadline: 3 May 2024, 1600 Eastern Time

Stage One – Based on an assessment of the white papers submitted, the technical point-of-contact (TPOC) will advise prospective proposers whether the proposals outlined in their white papers were judged to be competitive for BARI award selection, and will then invite the most promising subset of proposals to submit a full proposal for funding consideration. **NB: White Papers are optional, though strongly encouraged.**

Stage Two – Subsequent to white paper feedback, interested entities will be asked to submit full proposals. All proposals submitted under the terms and conditions cited in this NFO will be evaluated in accordance with the evaluation criteria stated herein. **NB: Entities may submit a proposal without submitting a white paper, though this is discouraged.**

Applicants must complete all mandatory forms and any optional forms (e.g., SF-LLL Disclosure of Lobbying Activities) in accordance with the instructions on the forms and the additional instructions below. Please ensure that your attachments are not password protected.

Stage Two applications will only be accepted if submitted through Grants.gov. Organizations must have a Unique Entity Identifier (UEI), active System for Award Management (SAM) registration, and Grants.gov account to apply for grants.

C. FORMAT FOR SUBMISSIONS

The following formatting rules apply for the file attachments for White Paper and Full Proposal submissions, except as indicated below:

- Paper size when printed – 8.5 x 11-inch white paper, one-sided
- Margins – 1 inch
- Spacing – single
- Font – No smaller than Times New Roman, 12-point font (excluding mandatory forms, which may have other font requirements)
- Number of pages
 - WHITE PAPER: 5 pages
 - FULL PROPOSAL: 25 pages. The 25-page limit applies to the technical portion of the application, which consists of the following: Project Summary/Abstract and Project Narrative. Pages exceeding this limit will not be considered in the application evaluation.

D. APPLICATION WITHDRAWAL

An applicant may withdraw an application at any time before award by written notice. Notice of withdrawal shall be sent to the grants officer identified in this announcement. Withdrawals are effective upon receipt of notice by the grants officer.

E. WHITE PAPERS

1. WHITE PAPER FORMAT AND CONTENT

Submitted documentation should be in PDF format and include in a single document:

- A cover letter (optional), not to exceed one page.
- A cover page, labeled “APPLICATION WHITE PAPER,” that includes the Notice of Funding Opportunity number, proposed project title, and prospective applicant's technical point of contact with telephone number, and e-mail address.
- Curriculum vitae (CV) of key investigators (optional but encouraged)
- The white paper (five (5) page limit, single-sided) including:
 - Identification of the research and issues including the state of the field
 - Proposed technical approach
 - Potential team and abbreviated management plan
 - Summary of estimated costs
 - Reference citations, if any, may be included outside the five-page limit
- The white paper will describe both US and Finland efforts and their interaction.

OUSDR&E) and AKA are interested in the research outlined in the Program Description of this NFO. For this reason, the application narrative must clearly describe what research the US and Finland research teams will accomplish collaboratively, as well as what will be accomplished by the US and Finland research teams individually. The white paper must also provide budget breakouts for the US research team, in US Dollars, and the Finland research team, in Euros.

The white paper should provide sufficient information on the research being proposed (e.g., hypothesis, theories, concepts, methods, approaches, data collection, measurement and analyses) to allow for an assessment by subject matter experts, with emphasis on the key questions raised in the Research Areas and Objectives of the topic description.

2. WHITE PAPER SUBMISSION

White papers and supporting documentation must be submitted as email attachments to BOTH jeanluc.cambier.civ@mail.mil AND flagship@aka.fi no later than 1600 Eastern Time (US) / 2300 Eastern European Time on 12 February 2024. E-mail transmission is not instantaneous and delays in transmission may occur anywhere along the route. The Funders takes no responsibility for any delays in the transmission of an e-mail. The prospective applicant is responsible for allowing enough time to complete the required application components, upload the white paper, and submit via e-mail before the deadline. The earlier submission of the white paper will be considered as the time stamp for eligibility. It is not necessary for white papers to carry official institutional signatures.

The submission email subject line should indicate the BARI white paper submission.

An e-mail confirmation will be sent to the applicant within three business days of submission. Documents submitted after the deadline or found to be non-compliant with the requirements described above will not be reviewed.

F. FULL PROPOSALS

1. UNIQUE ENTITY IDENTIFIER AND SYSTEM FOR AWARD MANAGEMENT

Applications will only be accepted if submitted through Grants.gov.

Organizations must have a Unique Entity Identifier (UEI), active System for Award Management (SAM) registration, and Grants.gov account to apply for grants and cooperative agreements. Please consult SAM.gov and Grants.gov for assistance in registering for SAM and Grants.gov.

The Government may not make a Federal award until the applicant has complied with all unique entity identifier and SAM requirements and, if an applicant has not fully complied with the requirements by the time the Federal awarding agency is ready to make a Federal award, the Federal awarding agency may determine that the applicant is not qualified to receive a Federal award and use that determination as a basis for making a Federal award to another applicant.

The Federal Assistance Certifications Report is an attestation that the entity will abide by the requirements of the various laws and regulations; therefore, as applicable, you are still required to submit any documentation, including the SF-LLL Disclosure of Lobbying Activities (if applicable), and informing DoD of unpaid delinquent tax liability or a felony conviction under any Federal law.

Any attachment containing additional certifications should be prefaced by the following statement: “By checking “I Agree” on the SF-424 Block 21 you agree to abide by the following statement: “By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. ([18 U.S.C. 1001](#))”

Offerors are responsible for submitting their applications in sufficient time to allow them to reach Grants.gov by the date and time specified in this announcement. It is strongly recommended that applications be uploaded at least two days before the closing date and time. This will help avoid problems caused by high system usage or any potential technical and/or input problems involving the offeror’s own equipment. It will also allow any application errors detected by Grants.gov to be corrected in time for the application to be resubmitted. If the application is received by Grants.gov after the exact time and date specified as the deadline for receipt, it will be considered “late” and cannot be considered for review.

2. REQUIRED AND OPTIONAL FORMS

The following SF-424 (R&R) forms and, as applicable, attachments are required for all Full Proposal submissions:

- SF424 (R & R) [5.0]
- Assurances for Non-Construction Programs (SF-424B - R & R) [1.1]

- Disclosure of Lobbying Activities (SF-LLL) [2.0]
 - Budget Information for Non-Construction Programs (SF-424A) [1.0]
 - Project Abstract Summary [2.0]
 - Project Narrative Attachment Form [1.2]
 - Research & Related Budget [3.0]
 - Research & Related Personal Data [1.2]
 - Research & Related Senior/Key Person Profile [3.0]
- a. Project Summary/Abstract (Field 7 on the form) (Mandatory) – The Project Summary/Abstract must be no longer than a single page. The abstract must be marked that it is publicly releasable, as abstracts for all awarded applications will be placed on a DoD website(s) searchable by the public. The abstract should provide a concise description of the equipment/instrumentation requested (if any), using terminology the public can understand, and the research/research-related education that it will support. The header of the abstract should identify the PI, the institution, and the application title.
 - b. Project Narrative (Field 8 on the form) – The project narrative must address the following:
 - Identification of the research and issues including the state of the art in the field
 - Proposed technical approach and how it will meet the goals and objectives outlined in Section I.C Program Description and Objectives
 - Potential team and management plan and student training plan
 - Summary of estimated costs
 - The project narrative must describe both US and Finland efforts and their interaction.

G. SUBMISSION DATES AND TIMES

Applications must be received by 1600 Eastern Time, 3 May 2024. Applicants are responsible for submitting their applications in sufficient time to allow them to reach Grants.gov by the specified time. To minimize the possibility of a late submission due to unexpected network or equipment issues, DoD recommends that applications be submitted at least two days prior to the date and time indicated above. If the application is received by Grants.gov after the exact time and date specified as the deadline for receipt, it will be considered “late” and will not be considered for review. Acceptable evidence to establish the time of receipt by Grants.gov includes documentary evidence of receipt maintained by Grants.gov.

If an emergency or unanticipated event interrupts normal federal government processes so that applications cannot be received by Grants.gov by the exact time specified in this NFO, and the situation precludes amendment of the NFO closing date, the time specified for receipt of applications will be deemed to be extended to the same time of day specified in this NFO on the first work day on which normal federal government processes resume.

Application Receipt Notices - Grants.gov will provide a series of emails to the applicant confirming submission and receipt of the application. Applicants can track the status of their applications at <http://www.grants.gov/web/grants/applicants/track-my-application.html>.

There is no requirement for intergovernmental review under this NFO.

Funding provided by the US DoD will only be used for the US research team. Funding provided by the AKA will only be used for the Finland research team. These funds will be issued as separate awards to the respective national teams, and each award will be subject to the respective national conditions, as outlined in Sections I.E and IX of this document.

H. OTHER REQUIREMENTS

1. EXECUTIVE ORDER 12372

This funding opportunity is not subject to [Executive Order 12372](#).

2. OTHER SUBMISSION REQUIREMENTS AND INFORMATION

Physical/facsimile delivery by the Applicant is not authorized and will not be accepted.

3. AMENDMENTS TO ANNOUNCEMENTS

If this announcement is amended, then all terms and conditions, which are not amended, shall remain unchanged. Applicants shall acknowledge receipt of any amendments to this NFO by: (1) identifying the amendment in its application, or (2) by separate letter upon receipt of the amendment. The Government must receive the acknowledgment by the date/time specified for receipt of applications.

4. MODIFICATIONS AND WITHDRAWALS OF APPLICATIONS

The announced Application due date and procedures for guaranteeing timely submission of Applications shall also be applied to those Applicants submitting modifications to or withdrawals of Applications.

5. PROTESTS

The decision of the Grants Officer relative to any protest filed will be final unless the protester appeals to the WHS/AD Competition Advocate:

Mr. David Kao
Deputy Director, WHS/AD
4800 Mark Center Drive, Suite 09F09
Alexandria, VA 22350

The Recipient(s) shall proceed diligently with preparation of its Application(s) or performance under an award, pending final resolution of any request for relief, appeal, or action arising under the award, and comply with any decision of the Grants Officer.

I. FUNDING RESTRICTIONS

Per 2 CFR 200.216, funds may not be used to procure telecommunications equipment or video surveillance services or equipment produced by:

- Huawei Technologies Company,
- ZTE Corporation Hytera Communications Corporation,
- Hangzhou Hikvision Digital Technology Company,
- Dahua Technology Company
- Any subsidiary or affiliate of such entities

The prospective Finland applicants are asked to take notice of these restrictions.

V. APPLICATION REVIEW INFORMATION

A. EVALUATION CRITERIA

Proposals submitted in response to this NFO will be evaluated using the factors listed below:

1. Overall scientific and technical merits of the proposal and responsiveness to the topic (i.e., the degree of innovation, soundness of technical concept, Applicant's awareness of the state of the art and understanding of the scope of the problem, significance and originality of the technical approach needed to address/solve the problem, anticipated scientific impact within the field and the likelihood of exploitation in future research).
2. Potential relationship of the proposed research to DoD missions and themes represented by the Finnish Flagships of the Research Council of Finland's Flagship Programme.
3. The degree of cross-disciplinary research that integrates capabilities and experience towards a comprehensive vision in response to the topic, and with the potential to stimulate the growth of a new scientific discipline.
4. Qualifications, capabilities and experience of the Principal Investigators (PI) and other key personnel who are deemed essential to achieving the objectives, and/or required facilities and equipment.
5. The level of interaction between US and Finland teams, and the integration of students and the level of education and degree-granting made possible under this program, potentially including exchange or joint opportunities.

All information necessary for the review and evaluation of an application must be contained in the application itself. No other material will be provided to the panel. Applications should contain sufficient technical detail to allow for in-depth technical assessment.

An initial review of the applications will be conducted to ensure compliance with the requirements of this NFO. Failure to comply with the requirements of the NFO may result in an application receiving no further consideration for award.

An award under this NFO will be made on the basis of the evaluation criteria listed above.

WHS/AD reserves the right to remove Offerors from award consideration if the parties fail to reach agreement on award terms, conditions, or cost/price within a reasonable time; or if the Offerors fail to provide requested or required additional information in a timely manner.

B. REVIEW AND SELECTION PROCESS

Reviewers may include Government personnel and Non-Government reviewers including university faculty and staff researchers. Adjectival ratings may be used in the Full Application evaluation.

Each reviewer is required to sign a conflict-of-interest and confidentiality statement attesting that the reviewer has no known conflicts of interest, and that application and evaluation information will not be disclosed outside the evaluation panel. The names and affiliations of reviewers are not disclosed.

Offerors are advised that employees of commercial firms under contract to the government may be used to administratively process applications. By submitting an application, an offeror consents to allowing access to its application(s) by support contractors. These support contracts include nondisclosure agreements prohibiting their contractor employees from disclosing any information submitted by offerors.

In addition to the technical/program review, the DoD does a budget review and a risk review as directed by 2 CFR 200.206, including a review of the Federal Awardee Performance and Integrity Information System (FAPIIS). Offerors may review information in FAPIIS and comment on any information entered into that system. Comments made by offerors will be taken into account in addition to other information in considering offerors' integrity, business ethics, and record of performance.

Note: At the time of application, there is no additional material to be submitted for this review. Additional information may be requested, if needed. A Negotiated Indirect Cost Rate Agreement (NICRA) may be required in order for an awardee to invoice for indirect costs. If the Offeror does not currently hold a NICRA, describe the current status of the organization's request for such an agreement with its cognizant agency.

IAW 2 CFR §200.414(f), any non-Federal entity that has never received a negotiated indirect cost rate, except for those non-Federal entities described in Appendix VII to 2 CFR §200, may elect to charge a de minimis rate of 10% of modified total direct costs (MTDC) which may be used indefinitely.

NOTE: Failure to adequately provide detailed cost data will require the Grants Officer to contact the proposing organization for the requisite information. This will result in a delay of the award. All Offerors are required to submit a thoroughly detailed cost breakdown. The Grants Officer must be able to determine that all proposed costs are allowable and reasonable. A detailed budget will facilitate this cost analysis.

Evaluation Panel: Technical details and budgets submitted under this NFO will be protected from unauthorized disclosure. The cognizant Government Program Officer and other Government subject matter experts will perform the evaluation of technical applications. Restrictive notices notwithstanding, one or more OSD covered support contractors may be utilized as subject matter experts providing technical support, but will not participate in the evaluation of proposals. Each support contractor employee that has access to technical and cost applications submitted in response to this NFO will be required to sign a nondisclosure statement prior to receipt of any application submissions.

C. AWARD DECISION

The Government reserves the right to select for negotiation all, some, one, or none of the submission received in response to this NFO and to make awards without discussions. Therefore, Applicant Proposals should include the applicant's best response to this announcement. However, the Government reserves the right to conduct discussions if it is determined by the Grants Officer to be necessary.

The Government reserves the right to request additional information once award has been determined. The Government reserves the right to remove Applicants from award consideration should the parties fail to reach agreement on award terms within a reasonable time or the Applicant fails to provide requested additional information in a timely manner.

The Recipient(s) that has been deemed successful will receive a pre-award notice via e-mail from the WHS/AD Grants Officer. The Government may initiate Cooperative Agreement negotiations when deemed appropriate to do so. Unsuccessful applicants will also be notified via e-mail at that time.

Once a recipient of award is announced, the recipient of award only shall submit the required information for electronic submission. The recipient of award shall use the Grants.gov website (<https://www.grants.gov>). Recipient shall complete the mandatory forms in the application package template associated with this NFO.

D. FEDERAL SHARE NOTICE

It is anticipated that the Federal share of any award under the announcement may exceed the simplified acquisition threshold, inform applicants that: (i) the agency will review the information that is currently in the designated integrity and performance system through SAM (currently FAPIIS); (ii) an applicant may review information in FAPIIS and comment on any information about itself; and (iii) the agency will

consider any comments by the applicant, along with other information in FAPIIS, in making judgement about the applicant's integrity, business ethics and record of performance under Federal awards when completing a review of risk (see DoD Instruction 3210.08 on use of the performance and integrity information in FAPIIS and 2 CFR 200.205 "Federal awarding agency review of risk posed by applicants.")

VI. FEDERAL AWARD ADMINISTRATION INFORMATION

A. AWARD NOTICES

Applicants whose applications are recommended for negotiation of award will be contacted by a DoD Contract/Grant Specialist to discuss any additional information required for award. This may include representations and certifications, revised budgets or budget explanations, or other information as applicable to the proposed award. The actual award start date will be determined at this time.

Applicants who did not receive an award are not entitled to a debrief.

The notification e-mail regarding a selection is not authorization to commit or expend DoD funds. A DoD grants officer is the only person authorized to obligate and approve the use of Federal funds. This authorization is in the form of a signed award.

B. RECIPIENT QUALIFICATION

Prior to making an award under this NFO in an amount greater than the simplified acquisition threshold, which currently is \$150,000, the DoD Grants Officer will review and consider any information about the applicant that is in the designated integrity and performance system accessible through SAM (currently the Federal Awardee Performance and Integrity Information System (FAPIIS)) (see 41 U.S.C. 2313).

An applicant may, at its option, review information currently in FAPIIS (accessible through SAM) and comment on any information about itself that a Federal awarding agency (DoD or other federal awarding agency) previously entered.

DoD will consider any comments by the applicant, in addition to the other information in FAPIIS, in making a judgment about the applicant's integrity, business ethics, and record of performance under federal awards when completing the review of risk posed by applicants as described in 2 CFR 200.205, Federal awarding agency review of risk posed by applicants, as implemented by DoD at 2 CFR part 1103.

C. ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENTS (US SPECIFIC)

NP Article I. Nondiscrimination National Policy Requirements. (December 2014)
Section A. Cross-cutting nondiscrimination requirements. By signing this award or accepting funds under this award, you assure that you will comply with applicable provisions of the national policies prohibiting discrimination:

1. On the basis of race, color, or national origin, in Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d et seq.), as implemented by Department of Defense (DoD) regulations at 32 CFR part 195.

2. On the basis of gender, blindness, or visual impairment, in Title IX of the Education Amendments of 1972 (20 U.S.C. 1681 et seq.), as implemented by DoD regulations at 32 CFR part 196.
3. On the basis of age, in the Age Discrimination Act of 1975 (42 U.S.C. 6101 et seq.), as implemented by Department of Health and Human Services regulations at 45 CFR part 90.
4. On the basis of disability, in the Rehabilitation Act of 1973 (29 U.S.C. 794), as implemented by Department of Justice regulations at 28 CFR part 41 and DoD regulations at 32 CFR part 56.
5. On the basis of disability in the Architectural Barriers Act of 1968 (42 U.S.C. 4151 et seq.) related to physically handicapped persons' ready access to, and use of, buildings and facilities for which Federal funds are used in design, construction, or alteration.

Section B. [Reserved]

NP Article II. Environmental National Policy Requirements. (December 2014)

Section A. Cross-cutting environmental requirements. You must:

1. Comply with all applicable Federal environmental laws and regulations. The laws and regulations identified in this section are not intended to be a complete list.
2. Comply with applicable provisions of the Clean Air Act (42 U.S.C. 7401, et seq.) and Clean Water Act (33 U.S.C. 1251, et seq.).
3. Comply with applicable provisions of the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. 4821-4846), as implemented by the Department of Housing and Urban Development at 24 CFR part 35. The requirements concern lead-based paint in buildings owned by the Federal Government or housing receiving Federal assistance.
4. Immediately identify to us, as the Federal awarding agency, any potential impact that you find this award may have on:
 - a. The quality of the “human environment”, as defined in 40 CFR 1508.14, including wetlands; and provide any help we may need to comply with the National Environmental Policy Act (NEPA, at 42 U.S.C. 4321 et seq.), the regulations at 40 CFR 1500-1508, and E.O. 12114, if applicable; and assist us to prepare Environmental Impact Statements or other environmental documentation. In such cases, you may take no action that will have an environmental impact (e.g., physical disturbance of a site such as breaking of ground) or limit the choice of reasonable alternatives to the proposed action until we provide written notification of Federal compliance with NEPA or E.O. 12114.
 - b. Flood-prone areas and provide any help we may need to comply with the National Flood Insurance Act of 1968, as amended by the Flood Disaster Protection Act of 1973 (42 U.S.C. 4001 et seq.), which require flood insurance, when available, for federally assisted construction or acquisition in flood-prone areas.
 - c. A land or water use or natural resource of a coastal zone that is part of a federally approved State coastal zone management plan and provide any help

- we may need to comply with the Coastal Zone Management Act of 1972 (16 U.S.C. 1451, et seq.) including preparation of a Federal agency Coastal Consistency Determination.
- d. Coastal barriers along the Atlantic and Gulf coasts and Great Lakes' shores and provide help we may need to comply with the Coastal Barrier Resources Act (16 U.S.C. 3501 et seq.), concerning preservation of barrier resources.
 - e. Any existing or proposed component of the National Wild and Scenic Rivers system and provide any help we may need to comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. 1271 et seq.).
 - f. Underground sources of drinking water in areas that have an aquifer that is the sole or principal drinking water source and in wellhead protection areas, and provide any help we may need to comply with the Safe Drinking Water Act (42 U.S.C. 300f et seq.).
5. Comply fully with the Endangered Species Act of 1973, as amended (ESA, at 16 U.S.C. 1531 et seq.), and implementing regulations of the Departments of the Interior (50 CFR parts 10-24) and Commerce (50 CFR parts 217-227). You also must provide any help we may need in complying with the consultation requirements of ESA section 7 (16 U.S.C. 1536) applicable to Federal agencies or any regulatory authorization we may need based on the award of this grant. This is not in lieu of responsibilities you have to comply with provisions of the Act that apply directly to you as a U.S. entity, independent of receiving this award.
 6. Must fully comply with the Marine Mammal Protection Act of 1972, as amended (MMPA, at 16 U.S.C. 1361 et seq.) and provide any assistance we may need in obtaining any required MMPA permit based on an award of this grant.

Section B. [Reserved]

NP Article III. National Policy Requirements Concerning Live Organisms.
(December 2014)

Section A. Cross-cutting requirements concerning live organisms.

1. *Human subjects.*
 - 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 at 32 CFR part 219, DoD Instruction (DoDI) 3216.02, 10 U.S.C. 980, and when applicable, Food and Drug Administration (FDA) regulations.
 - b. You must not begin performance of research involving human subjects, also known as human subjects research (HSR), that is covered under 32 CFR part 219, or that meets exemption criteria under 32 CFR 219.101(b), until you receive a formal notification of approval from a DoD Human Research Protection Official (HRPO). Approval to perform HSR under this award is received after the HRPO has performed a review of your documentation of planned HSR activities and has officially furnished a concurrence with your determination as presented in the documentation.
 - c. In order for the HRPO to accomplish this concurrence review, you must provide sufficient documentation to enable his or her assessment as follows:

- i. If the HSR meets an exemption criterion under 32 CFR 219.101(b), the documentation must include a citation of the exemption category under 32 CFR 219.101(b) and a rationale statement.
 - ii. If your activity is determined as “non-exempt research involving human subjects”, the documentation must include:
 - (A) Assurance of Compliance (i.e., Department of Health and Human Services Office for Human Research Protections (OHRP) Federal Wide Assurance (FWA)) appropriate for the scope of work or program plan; and
 - (B) Institutional Review Board (IRB) approval, as well as all documentation reviewed by the IRB to make their determination.
 - d. The HRPO retains final judgment on what activities constitute HSR, whether an exempt category applies, whether the risk determination is appropriate, and whether the planned HSR activities comply with the requirements in paragraph 1.a of this section.
 - e. You must notify the HRPO immediately of any suspensions or terminations of the Assurance of Compliance.
 - f. DoD staff, consultants, and advisory groups may independently review and inspect your research and research procedures involving human subjects and, based on such findings, DoD may prohibit research that presents unacceptable hazards or otherwise fails to comply with DoD requirements.
 - g. Definitions for terms used in paragraph 1 of this article are found in DoDI 3216.02.
2. *Animals*
- a. Prior to initiating any animal work under the award, you must:
 - i. Register your research, development, test, and evaluation or training facility with the Secretary of Agriculture in accordance with 7 U.S.C. 2136 and 9 CFR 2.30, unless otherwise exempt from this requirement by meeting the conditions in 7 U.S.C. 2136 and 9 CFR parts 1–4 for the duration of the activity.
 - ii. Have your proposed animal use approved in accordance with Department of Defense Instruction (DoDI) 3216.01, Use of Animals in DoD Programs by a DoD Component Headquarters Oversight Office.
 - iii. Furnish evidence of such registration and approval to the grants officer.
 - b. You must make the animals on which the research is being conducted, and all premises, facilities, vehicles, equipment, and records that support animal care and use available during business hours and at other times mutually agreeable to you, the United States Department of Agriculture Office of Animal and Plant Health Inspection Service (USDA/APHIS) representative, personnel representing the DoD component oversight offices, as well as the grants officer, to ascertain that you are compliant with 7 U.S.C. 2131 et seq., 9 CFR parts 1–4, and DoDI 3216.01.
 - c. Your care and use of animals must conform with the pertinent laws of the United States, regulations of the Department of Agriculture, and regulations, policies, and procedures of the Department of Defense (see 7 U.S.C. 2131 et seq., 9 CFR parts 1–4, and DoDI 3216.01).

- d. You must acquire animals in accordance with DoDI 3216.01.
3. *Use of Remedies.* Failure to comply with the applicable requirements in paragraphs 1–2 of this section may result in the DoD Component's use of remedies, e.g., wholly or partially terminating or suspending the award, temporarily withholding payment under the award pending correction of the deficiency, or disallowing all or part of the cost of the activity or action (including the federal share and any required cost sharing or matching) that is not in compliance. See OAR Article III.

Section B. [Reserved]

NP Article IV. Other National Policy Requirements. (December 2014)

Section A. Cross-cutting requirements.

1. *Debarment and suspension.* You must comply with requirements regarding debarment and suspension in Subpart C of 2 CFR part 180, as adopted by DoD at 2 CFR part 1125. This includes requirements concerning your principals under this award, as well as requirements concerning your procurement transactions and subawards that are implemented in PROC Articles I through III and SUB Article II.
2. *Drug-free workplace.* You must comply with drug-free workplace requirements in Subpart B of 2 CFR part 26, which is the DoD implementation of 41 U.S.C. chapter 81, “Drug-Free Workplace.”
3. *Lobbying.*
 - a. You must comply with the restrictions on lobbying in 31 U.S.C. 1352, as implemented by DoD at 32 CFR part 28, and submit all disclosures required by that statute and regulation.
 - b. You must comply with the prohibition in 18 U.S.C. 1913 on the use of Federal funds, absent express Congressional authorization, to pay directly or indirectly for any service, advertisement or other written matter, telephone communication, or other device intended to influence at any time a Member of Congress or official of any government concerning any legislation, law, policy, appropriation, or ratification.
 - c. If you are a nonprofit organization described in section 501(c)(4) of title 26, United States Code (the Internal Revenue Code of 1968), you may not engage in lobbying activities as defined in the Lobbying Disclosure Act of 1995 (2 U.S.C., chapter 26). If we determine that you have engaged in lobbying activities, we will cease all payments to you under this and other awards and terminate the awards unilaterally for material failure to comply with the award terms and conditions.
4. *Officials not to benefit.* You must comply with the requirement that no member of Congress shall be admitted to any share or part of this award, or to any benefit arising from it, in accordance with 41 U.S.C. 6306.
5. *Hatch Act.* If applicable, you must comply with the provisions of the Hatch Act (5 U.S.C. 1501-1508) concerning political activities of certain State and local government employees, as implemented by the Office of Personnel Management at 5 CFR part 151, which limits political activity of employees or officers of State

- or local governments whose employment is connected to an activity financed in whole or part with Federal funds.
6. *Native American graves protection and repatriation.* If you control or possess Native American remains and associated funerary objects, you must comply with the requirements of 43 CFR part 10, the Department of the Interior implementation of the Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C., chapter 32).
 7. *Fly America Act.* You must comply with the International Air Transportation Fair Competitive Practices Act of 1974 (49 U.S.C. 40118), commonly referred to as the “Fly America Act,” and implementing regulations at 41 CFR 301-10.131 through 301-10.143. The law and regulations require that U.S. Government financed international air travel of passengers and transportation of personal effects or property must use a U.S. Flag air carrier or be performed under a cost sharing arrangement with a U.S. carrier, if such service is available.
 8. *Use of United States-flag vessels.* You must comply with the following requirements of the Department of Transportation at 46 CFR 381.7, in regulations implementing the Cargo Preference Act of 1954:
 - a. Pursuant to Public Law 83-664 (46 U.S.C. 55305), at least 50 percent of any equipment, materials or commodities procured, contracted for or otherwise obtained with funds under this award, and which may be transported by ocean vessel, must be transported on privately owned United States-flag commercial vessels, if available.
 - b. Within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, “on-board” commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph 8.a of this section must be furnished to both our award administrator (through you in the case of your contractor's bill-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.
 9. *Research misconduct.* You must comply with requirements concerning research misconduct in Enclosure 4 to DoD Instruction 3210.7, “Research Integrity and Misconduct.” The Instruction implements the Governmentwide research misconduct policy that the Office of Science and Technology Policy published in the FEDERAL REGISTER (65 FR 76260, December 6, 2000, available through the U.S. Government Printing Office website:
<https://www.federalregister.gov/documents/2000/12/06/00-30852/executive-office-of-the-president-federal-policy-on-research-misconduct-preamble-for-research>).
 10. *Requirements for an Institution of Higher Education Concerning Military Recruiters and Reserve Officers Training Corps (ROTC).*
 - a. As a condition for receiving funds available to the DoD under this award, you agree that you are not an institution of higher education (as defined in 32 CFR part 216) that has a policy or practice that either prohibits, or in effect prevents:

- i. The Secretary of a Military Department from maintaining, establishing, or operating a unit of the Senior Reserve Officers Training Corps (ROTC) - in accordance with 10 U.S.C. 654 and other applicable Federal laws - at that institution (or any sub-element of that institution);
 - ii. Any student at that institution (or any sub-element of that institution) from enrolling in a unit of the Senior ROTC at another institution of higher education.
 - iii. The Secretary of a Military Department or Secretary of Homeland Security from gaining access to campuses, or access to students (who are 17 years of age or older) on campuses, for purposes of military recruiting in a manner that is at least equal in quality and scope to the access to campuses and to students that is provided to any other employer; or
 - iv. Access by military recruiters for purposes of military recruiting to the names of students (who are 17 years of age or older and enrolled at that institution or any sub-element of that institution); their addresses, telephone listings, dates and places of birth, levels of education, academic majors, and degrees received; and the most recent educational institutions in which they were enrolled.
- b. If you are determined, using the procedures in 32 CFR part 216, to be such an institution of higher education during the period of performance of this award, we:
- i. Will cease all payments to you of DoD funds under this award and all other DoD grants and cooperative agreements; and
 - ii. May suspend or terminate those awards unilaterally for material failure to comply with the award terms and conditions.
11. *Historic preservation.* You must identify to us any:
- a. Property listed or eligible for listing on the National Register of Historic Places that will be affected by this award, and provide any help we may need, with respect to this award, to comply with Section 106 of the National Historic Preservation Act of 1966 (54 U.S.C. 306108), as implemented by the Advisory Council on Historic Preservation regulations at 36 CFR part 800 and Executive Order 11593, "Identification and Protection of Historic Properties," [3 CFR, 1971-1975 Comp., p. 559]. Impacts to historical properties are included in the definition of "human environment" that require impact assessment under NEPA (See NP Article II, Section A).
 - b. Potential under this award for irreparable loss or destruction of significant scientific, prehistorical, historical, or archeological data, and provide any help we may need, with respect to this award, to comply with the Archaeological and Historic Preservation Act of 1974 (54 U.S.C. chapter 3125).
12. *Relocation and real property acquisition.* You must comply with applicable provisions of 49 CFR part 24, which implements the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 U.S.C. 4601, et seq.) and provides for fair and equitable treatment of persons displaced by federally assisted programs or persons whose property is acquired as a result of such programs.

13. *Confidentiality of patient records.* You must keep confidential any records that you maintain of the identity, diagnosis, prognosis, or treatment of any patient in connection with any program or activity relating to substance abuse education, prevention, training, treatment, or rehabilitation that is assisted directly or indirectly under this award, in accordance with 42 U.S.C. 290dd-2.
14. *Pro-Children Act.* You must comply with applicable restrictions in the Pro-Children Act of 1994 (Title 20, Chapter 68, subchapter X, Part B of the U.S. Code) on smoking in any indoor facility:
 - a. Constructed, operated, or maintained under this award and used for routine or regular provision of kindergarten, elementary, or secondary education or library services to children under the age of 18.
 - b. Owned, leased, or contracted for and used under this award for the routine provision of federally funded health care, day care, or early childhood development (Head Start) services to children under the age of 18.
15. *Constitution Day.* You must comply with Public Law 108-447, Div. J, Title I, Sec. 111 (36 U.S.C. 106 note), which requires each educational institution receiving Federal funds in a Federal fiscal year to hold an educational program on the United States Constitution on September 17th during that year for the students served by the educational institution.
16. *Trafficking in persons.* You must comply with requirements concerning trafficking in persons specified in the award term at 2 CFR 175.15(b), as applicable.
17. *Whistleblower protections.* You must comply with 10 U.S.C. 2409, including the:
 - a. Prohibition on reprisals against employees disclosing certain types of information to specified persons or bodies; and
 - b. Requirement to notify your employees in writing, in the predominant native language of the workforce, of their rights and protections under that statute.

Section B. [Reserved]

D. REPORTING REQUIREMENTS

Recipient of the US Grant must submit a final financial report using the SF-425, Federal Financial Report, and a final technical report describing how acquired equipment/instrumentation furthered achievement of the objectives in the approved application. AKA-funded grant-holders are expected to perform reporting according to the guidelines of the Research Council of Finland: <https://www.aka.fi/en/research-funding/apply-for-funding/how-to-use-funding/>.

If the total federal share of the award exceeds \$500,000, the reporting requirements reflected in Appendix II to Part 200 of Title 2 CFR will be included in the terms and conditions of the award.

Financial and Performance Reporting: reporting shall vary based on the details of the project, however, all reporting shall compare marginal performance progress with the corresponding financial outlays.

Presentation of Findings: varies by project and specified deliverables.

Property Reports: only as applicable to proposed projects. Under 2 CFR 200, the recipient shall submit annual inventory listing to all equipment in excess of \$5,000 acquired under this grant.

Document submission: All reporting requirements above shall be sent via email to the Government Technical Program Point of Contact.

Awardees will need to comply with the reporting requirements in 2 CFR 170: Reporting Sub-award and Executive Compensation Information.

The terms and conditions of the award will provide the specifics on how to submit the reports and any required sections for those reports.

VII. AGENCY CONTACTS

Questions regarding program content or technical issues should be directed by the US research team to the DoD Program Technical Point of Contact, and by the Finnish research team to the AKA Program Technical Point of Contact:

For US: Dr. Jean-Luc Cambier, Technical Director
OUSD(R&E) Basic Research Office
Email: jeanluc.cambier.civ@mail.mil

For Finland: Dr. Risto Vilkkö, Senior Science Adviser
Research Council of Finland (AKA)
Email: risto.vilkko@aka.fi

Questions regarding administrative problems or grant administration should be directed to WHS Grants Personnel:

Jonathan Bertsch, Grants Officer
Washington Headquarter Services, Acquisition Directorate
Email: jonathan.e.bertsch.civ@mail.mil

Fedline Crowell, Grants Specialist
Washington Headquarter Services, Acquisition Directorate
Email: fedline.crowell.civ@mail.mil

VIII. OTHER INFORMATION

The Federal government is not obligated to make any Federal award as a result of the announcement. Only Grants Officers can bind the Federal government to the expenditure of fund.

This is provided for your information only. The terms & conditions will be negotiated with the selected recipient prior to award of the cooperative agreement.

IX. AKA SPECIFIC INFORMATION (NOT APPLICABLE TO US AWARDS)

1. The successful Finland team will be invited to submit an application through AKA's Funding Service, in order for a Finland grant to be awarded, and this will be the responsibility of the Finland team Principal Investigator.
2. The proposed Finland component of the proposal must comply with all of AKA's standard conditions, including eligible organizations, participants, and allowable costs, as detailed here: <https://www.aka.fi/en/research-funding/apply-for-funding/how-to-use-funding/>.
3. The maximum cost of the Finland component of this program is €3,000,000.00, and we expect to issue one (1) award for one large consortium including 2-5 consortium parties. The Research Council of Finland will fund up to 70% of the total costs of the Finland activity in line with the AKA's full economic cost principles.
4. The Finland team requesting funding from AKA must prepare a budget detailing costs and the requested amount in AKA's budget template.

X. OTHER ADMINISTRATIVE REQUIREMENTS

Award recipients must provide assurances and certifications on all applicable compliance requirements. Any awards resulting from this NFO will be subject to the national policy requirements of assistance awards, such as Debarment and Suspension, Drug Free Workplace, Lobbying, Hatch Act, etc.