

**Department of Homeland Security (DHS) Science and Technology Directorate
(S&T) Chemical and Biological Defense Division (CBD) **OBAA 14-003/Call 0019****

1. **Announcement Number:** Open Broad Agency Announcement Number (OBAA) 14-003/Call 0019
2. **FBO Solicitation Number:** HSHQDC-14-R-B0009
3. **Solicitation Event Dates/Time (Local Eastern Time) :**
 - **White Paper Opening Date – 10 January 2017**
 - **White Paper Closing Date – 7 February 2017 3:00 PM**
 - Notification of Selection/Non Selection of White Papers– 7 March 2017
 - Notification to Submit Full Proposals– 7 March 2017
 - **Full Proposal Due Date– 7 April 2017 3:00 PM**
 - Notification of Selection/Non Selection of Full Proposals– 19 May 2017

There will be no exceptions to the time and date on which responses are due, unless determined otherwise by the Government. White Papers and Full Proposals received after the designated closing date/time will not be considered.

Note: This Call will be conducted in accordance with the Two-Phased Evaluation Process as described under Section 1.6 of the OBAA. The OBAA Solicitation HSHQDC-14-R-B00009 was posted on Federal Business Opportunities on June 16, 2014. See below link.

<https://www.fbo.gov/spg/DHS/OCPO/DHS-OCPO/HSHQDC-14-R-B0009 /listing.html>

This Call will consist of the solicitation, receipt, and evaluation of both White Papers and Full Proposals. Under this evaluation, Phase 1 will consist of the solicitation, receipt, and evaluation of the White Papers (using standardized DHS Chemical Biological Defense Division “Project Proposal Form” format) from potential performers. Entries in the various sections of the Project Proposal Forms (White Papers) should be concise and conform to the specified formatting and word count limitations. No formal transmittal letter is required for the Phase 1 responses. Once the white paper peer/scientific review process has been completed, offerors will be notified via e-mail, or in writing, whether as a result of its white paper submission, the offeror is “encouraged” or “not encouraged” to submit full proposals.

A down-selection process will then be conducted by DHS and those Phase 1 White Paper Proposal Form (OBAA Attachment A) proposals encouraged to submit full proposals will be invited to participate in Phase 2, which will consist of the solicitation, receipt, and evaluation of a Full Proposal, limited to 30 pages, excluding the Formal Transmittal Letter, Cover Page, Summary of Costs and Related Information, Table of Contents and resumes/biographical information for proposed performers. Once the Full Proposal peer/scientific review process has been completed, offerors will be notified via e-mail, or in writing, that its proposal has been selected, selected but not funded, or not selected for award.

4. **OBAA Call Technical Topic Area (TTA) of Interest:**

**Department of Homeland Security (DHS) Science and Technology Directorate
(S&T) Chemical and Biological Defense Division (CBD) OBAA 14-003/Call 0019**

The following **Technical Topic Area (TTA)** is representative only. It is provided to help interested offerors understand the Call 0019 class of need and potential scope.

CBD.02 – Surveillance and Detection: Advance the capability to provide early warning and detection of a chemical or biological incident in a cost-sustainable way. Effective surveillance provides essential information to decision authorities on a timescale that allows them to take actions towards mitigating or responding to the threat.

4.1. Research Opportunity Description

4.1.1 DHS S&T: Analytics for Prediction of Bio-threat Incidents

Background

The U.S. Department of Homeland Security (DHS) is committed to using and developing state-of-the-art technologies to make America safer. The DHS Science and Technology Directorate (S&T) is focused on developing innovative technology solutions and providing assessments, analyses and reports for the Homeland Security Enterprise. DHS's mission space includes preventing, detecting, responding to, and recovering from intentional or accidental introduction of biological and chemical agents that present a threat against the Nation's human population and critical infrastructure. The Chemical Biological Defense Division (CBD) within the Homeland Security Advanced Research Projects Agency (HSARPA) of DHS S&T supports this preparation for a biological threat event by identifying and developing technologies for DHS operational components to increase situational awareness, reduce potential consequences, and quicken appropriate responses. To ensure current and continuous customer, stakeholder, and developer feedback, DHS S&T is actively engaged with DHS operational components; federal, state, and local authorities; and industry to develop and transition new technologies that significantly improve upon current capabilities to respond to threats.

Multiple federal agencies have undertaken steps to incorporate biosurveillance (BSV) operations into their missions. BSV efforts through the Department of Health and Human Services and Department of Defense serve to promote proper health of the nation's population and those connected to the military, respectively. In line with DHS's mission, DHS S&T seeks to develop a comprehensive bioevent detection capability that biosurveillance analysts, public health investigators, and decision-makers from differing jurisdictions can use in real-time to predict or anticipate response measures for a future incident. In this context, a bioevent is a natural outbreak or an intentional release of an existing, emerging, or engineered biological threat agent. DHS S&T seeks to develop an in depth understanding and identify methods/technology that can be used to help predict future bioevents by increased bioevent clarity, improved overall situational awareness and anticipation, and reduce time to bioevent warning.

4.1.2. Description of White Paper Technical Topic Area: *Predictive Analytics*

DHS needs to expand its capacity for predictive analysis to inform decision making in field and operations centers, including real-time trend analysis and intelligence to predict operational risks and capability requirements. Desired capabilities include but are not limited to scalable models and mathematical algorithms that enable risk estimation for individual trade and travel entities

**Department of Homeland Security (DHS) Science and Technology Directorate
(S&T) Chemical and Biological Defense Division (CBD) OBAA 14-003/Call 0019**

(e.g. origin, commodity, trade operators etc.); “pattern of concern” recognition and associations between otherwise disparate entities; understanding and incorporation of disease factors such as morbidity, transmissibility, and environmental influences; and models for predicting geospatial, temporal, and pattern of movement of biological agents and emerging pests and pathogenic diseases of animals, humans, and plants, through trade, travel, and/or natural atmospheric circulation pattern. The needed capabilities should reach conclusions autonomously and/or send appropriate signals to inform senior subject matter experts (SMEs), public health officials, and others charged with making public health decisions.

White Papers and Proposals should explore innovative, novel technologies that enable the prediction of bioevents. Rather than forecasting where an existing disease is likely to spread, this topic seeks novel technologies or methods to predict bioevent outbreaks as accurately and as far in advance as possible. Means to accomplish this prediction include but are not limited to automated and unsupervised pattern recognition in syndromic data, diagnostic data, or sensor data streams; the use of self-organizing data structures, topological mapping, or other approaches; data analytics approaches such as quantification and visualization of uncertainty in multiple potential bioevents; and rapid model development and analysis. Successful proposals will offer a range of metrics available throughout the process that can be used to gauge technical performance, decision-making improvements, and potential outcomes to improve public health.

At a minimum, the following requirements must be addressed:

1. White Papers and Proposals must demonstrate use of data that inform decisions relevant to public health problem sets over an identified geographic region.
 2. The Offeror must identify the system’s measurable impact on specific public health policy decisions, including time to awareness and understanding of a biothreat incident.
 3. White Papers and Proposals should discuss how its advancements improve existing or create new biosurveillance capabilities.
5. **Number of Selections:** It is anticipated that multiple selections will be made depending on the quality of the submissions and availability of funds.
6. **Anticipated Ceiling:** Although subject to official fiscal appropriation and availability, it is anticipated that approximately \$2,000,000 of Fiscal Year (FY) 2017 funds will be available for any resultant awards under this OBAA Call. **The Government will reserve the right to incrementally fund any resultant proposals awarded from this OBAA Call as provided by the FAR 52.232-22, “Limitation of Funds.”** Contracts or other agreements that obligate funds will not have an initial period of performance that exceeds 12 months from the date of contract award. However, Offerors will be able to propose a base year effort with additional option years.
7. **Anticipated Award Type:** Award type is anticipated to be in the form of Cost Reimbursement type contracts. However, the Government will reserve the right to award Fixed Price or Interagency Agreements (IAs) to appropriate parties should the situation warrant.

**Department of Homeland Security (DHS) Science and Technology Directorate
(S&T) Chemical and Biological Defense Division (CBD) OBAA 14-003/Call 0019**

8. **Anticipated Award Dates:** The 3rd Quarter of Fiscal Year 2017 is when the Government anticipates making any resultant awards under this Call for those White Papers that are selected. However, the award date for any resultant contract award may vary based on the quality of the proposals received and the availability of funds.
9. **White Paper Instructions:** Offerors shall submit their White Papers in accordance with BAA 14-003, Section 5.3 - Format and Content of White Paper (Attachment A, White Paper Proposal Form).

White papers must be submitted to the DHS S&T BAA Portal at <https://baa2.st.dhs.gov/portal/BAA/>

White Papers must not be submitted to the OBAA FBO link nor should they be submitted directly to the DHS Contracting Officer. Please carefully follow all instructions shown in Section 5.2, Application and Submission Process.

10. **Full Proposal Instructions:** Offerors shall submit their Full Proposals in accordance with OBAA 14-003, Section 5.4 – Format and Content of Full Proposals.

Proposals must be submitted to the DHS S&T BAA Portal at <https://baa2.st.dhs.gov/portal/BAA/>

Proposals must not be submitted to the OBAA FBO link nor should they be submitted directly to the DHS Contracting Officer. Please carefully follow all instructions shown in Section 5.2, Application and Submission Process.

11. **Evaluation Criteria:** White Papers and Full Proposals will be evaluated in accordance with the evaluation criteria contained in the OBAA 14-003, Section 6.1 – Evaluation Criteria.

Evaluation of the submissions will be based on an assessment of the overall best value to the Government based on the aforementioned criteria. Award(s) will be made based upon White Paper and Full Proposal evaluation, funds availability, and other programmatic considerations including awards to lesser rated proposals where orthogonal or alternative approaches and technologies are deemed to be more technically advantageous. Once the evaluation process is complete, offerors will be notified of selection or non-selection for an award. Offerors not selected for an award may request feedback regarding the evaluation findings of submitted proposals. A written request to the Contracting Officer must be received within 3 calendar days of notification of non-selection.

12. **Foreign Concerns:** Foreign persons are advised that their participation may be subject to Export Control restrictions. Any such restrictions shall be reviewed on an individual award basis.

**Department of Homeland Security (DHS) Science and Technology Directorate
(S&T) Chemical and Biological Defense Division (CBD) OBAA 14-003/Call 0019**

13. Questions: Any questions concerning this Call must be submitted via email to the Contracting Officer at Michael.Jones@hq.dhs.gov no later than **January 26, 2017, 3:00 PM EST** in the following format:

Question #	Reference	Contractors' Question
1	General (if there is no specific document reference)	
2	(Example) OBAA 14-003, page 15, Section 5.2, first paragraph, second sentence	
3	(Example) OBAA 14-003/Call 0019, page 2, Section 9, first sentence	

Please include "Questions for OBAA 14-003/Call 0019" in the subject line. All questions and responses will be posted on the Federal Business Opportunities website <http://www.fbo.gov> and <https://baa2.st.dhs.gov> . Questions will only be accepted or answered electronically.