Part I:

TECHNICAL
DIVISIONAL REQUIREMENTS

LONG RANGE BROAD AGENCY ANNOUNCEMENT (LRBAA)
BAA 10-01
FOR
THE DEPARTMENT OF HOMELAND SECURITY
SCIENCE AND TECHNOLOGY DIRECTORATE

INTRODUCTION:

This is a Broad Agency Announcement (BAA) as contemplated in Federal Acquisition Regulation (FAR) 6.102(d)(2) and 35.016. A formal Request for Proposal (RFP) will not be issued.

The Department of Homeland Security (DHS) Science & Technology (S&T) Directorate will not issue paper copies of this Announcement. The DHS S&T reserves the right to select for award and fund all, some, or none of the Full Proposals received in response to this Announcement. No funding for direct reimbursement of proposal development costs will be allowed. Technical and cost proposals (or any other material) submitted in response to this BAA will not be returned. However, depending on the markings on the proposal, DHS S&T will adhere to FAR policy on handling source selection information and proprietary proposals. It is the policy of DHS S&T to treat all proposals as sensitive competitive information and to disclose their contents only for the purposes of evaluation.

Multiple awards are anticipated to be issued through this LRBAA and will be based on an assessment of the overall best value to the government. Awards will be made based upon the proposal evaluation, funds availability, and other programmatic considerations. Awards may take the form of contracts, grants, cooperative agreements, or other transaction (OTAs) agreements. Therefore, the applicable laws and regulations governing the legal vehicle used for award will depend on the legal vehicle chosen by DHS S&T. In the event an Offeror or subcontractor is a Federally Funded Research and Development Center (FFRDC), Department of Energy (DOE) National Laboratory, or other Federally funded entity, DHS S&T will work with the appropriate sponsoring agency to issue an interagency agreement pursuant to the Economy Act (31 U.S.C. 1531) or other appropriate authority.

Part I of this LRBAA (this portion) contains the Technical Requirements, Divisional Points of Contact, and general interest areas. *Please refer to Part I to determine if your specific area of interest is of particular interest to DHS S&T and to determine which division you should focus on. If you determine you have an idea that will be of interest, please open and print Part II, which will guide you through the requirements of the LRBAA submission process. It provides details on what shall be included in your White Paper or Full Proposal, explanations of how to submit and steps in the process, as well as the evaluation Factors and elements.*

I. GENERAL INFORMATION

1. Agency Name -

Department of Homeland Security
Science and Technology Directorate
Washington DC 20528

2. Research Opportunity Title -

DHS S&T Long Range Broad Agency Announcement

3. Research Opportunity Number -

BAA 10-01

4. Response Date -

This announcement will remain open until December 31, 2010, 11:59 PM, Eastern Standard Time (EST). White Papers and Full Proposals may be submitted at any time during this period.

5. Research Opportunities of Strategic Interest -

The mission of the DHS S&T Directorate is to "support basic and applied homeland security research to promote revolutionary changes in technologies; advance the development, testing and evaluation, and deployment of critical homeland security technologies; and accelerate the prototyping and deployment of technologies that would address homeland security vulnerabilities."

DHS S&T is interested in receiving proposals for Long Range Science and Technology Projects and innovative prototypes that offer potential for advancement and improvement of homeland security missions and operations. Readers shall note that this is an announcement to declare S&T's broad role in competitive funding of meritorious research across a spectrum of science and engineering disciplines. The overall mission and goal of S&T is to identify revolutionary, evolving, and maturing technologies that can be demonstrated to provide significant improvement to homeland security missions and operations through proof of concept and prototyping with potential for transition to current and future DHS acquisition processes. S&T will focus on those key areas where risk inhibits mission and operation investments and where significant capability payoffs can be expected for successful efforts. Related technologies are being pursued by other elements of the US Government, and in those cases, DHS S&T will leverage and use those technology developments wherever it is practicable and efficient to do so. S&T will also facilitate access to laboratory and operationally relevant test and evaluation facilities wherever reasonably available.

This Announcement is restricted to work relating to basic and applied *research* and that portion of advanced technology development *not* related to a specific system or hardware procurement. This Announcement does not cover support services, such as technical services, engineering services, or other types of support services. Such submissions are considered non-compliant with this LRBAA and will be rejected without further evaluation.

S&T is soliciting individuals or teams to conduct basic research, applied technology development, or the preparation of integrated prototypes for field investigations of the performance of new and innovative solutions. Contracts, grants, cooperative agreements, and other transaction agreement awards made under this BAA are for scientific study and experimentation directed towards advancing the state-of-the art or increasing knowledge or understanding.

It is incumbent of Offerors to clearly articulate the specific advances or innovations in science and technology contained in their submissions. ***It cannot be emphasized too strongly that all submissions must show future promise for one of the DHS homeland security operational environments.***

Fully developed products are not normally considered as a solution under this LRBAA, unless the Offeror is proposing a totally different application for the product or a modification is needed, and some research is required to determine if it will be successful.

Below are brief treatments of the Topical Areas or major categories of Research Opportunities of Strategic Interest. Each Topical Area has a reference code. For basic scientific research, the code is simply BSR. Each division has multiple categories, and these are noted as follows: The main category for Borders and Maritime Security (BMD), for example, is BMD.0, followed by BMD.A1, BMD.A2, etc., for each topic area of strategic interest.

Topical Areas of strategic interest include:

Border and Maritime Security (BMD.0) focuses on tools and technologies that improve the security of our Nation's borders and waterways without impeding the flow of commerce and travelers. Concepts and prototypes of interest to the Borders and Maritime Security division include pilot testing new surveillance, monitoring, and response capabilities that cover vast expanses of remote border territories; as well as the development and evaluation of security devices, and new inspection methods to secure the large volume of cargo entering our Nation's ports daily.

There are 3 subdivisions within Border and Maritime Security:

A. Border Security

- Detection of, tracking of, classifying of, and responding to all threats along the terrestrial and maritime border (BMD.1) – in particular, technologies that can:
  - ✓ Classify humans versus animals in rugged terrain, concealing foliage, water obstacles, mountains, and other environmental constraints
  - ✓ Lower false alarm rate (Pfa) with raised probability of detection (Pd); (Pd) should be at least 90%
  - ✓ Operate at low power consumption levels (2 year battery life)
  - ✓ Detect, exploit, interrogate, and remediate subterranean border tunnels
- Improved ballistic protection via personal protective equipment in particular; a focus on increased effectiveness against a wider-range of projectile types, plus lighter weight and integrated helmet protection. (BMD.2)
- Ability to use hand held non-intrusive inspection (NII) tools that allow the inspection of hidden or closed compartments, specifically to find contraband and security threats (people) at checkpoints or during ship boardings. (BMD.3)
- Ability for law enforcement officers to assure compliance of lawful orders using non-lethal means – in particular, the ability to disable vehicles, vessels, aircraft, and temporarily incapacitate persons to prevent the infliction of damage or harm. (BMD.4)

- Ability for law enforcement personnel to quickly identify the origin of gunfire and classify the type of weapon fired. (BMD.5)

- Improved analysis and decision-making tools that aid DHS watchstanders in evaluating information and making more timely and accurate decisions. (BMD.6)

- Enabling technology for securing the Nation's borders. (BMD.7)

B. Maritime Security

- Provide wide-area surveillance from the coast to beyond the horizon, as well as port and inland waterways, for detection, classification, tracking, and response. (BMD.8)

- Improved persistent, wide-area surveillance capabilities for guarding the U.S. coastal approaches from 12 to 120 miles offshore. (BMD.9)

- Improved situational awareness by tracking small boat activity, detecting anomalous and/or illegal behavior, and providing timely and actionable information in support of law enforcement and port security efforts. (BMD.10)

- Improved sensor performance to enable improved detection and tracking of small and large vessels by overcoming environmental clutter issues within the port/harbor as well as in coastal environments. (BMD.11)

- Advanced law enforcement capabilities, enhanced ability to protect critical infrastructure and key resources, and improved incident response and recovery management along the inland waterways, port/harbor, and coastal regions. (BMD.12)

- Concepts, methodologies, and/or technologies to more effectively track dangerous cargo being transported on inland rivers and waterways. (BMD.13)

- Improved data fusion and automated tools for command center operations – in particular, the improved ability for agencies to share information and collaborate when not co-located. (BMD.14)

- Ability for law-enforcement personnel to detect and identify narcotics, chemical warfare agents, toxic industrial chemicals, explosives, and contraband materials – in particular, the ability to identify multiple threats with one unit/one setup; operate on portable power; be wearable and self contained; and be able to sample for and detect contraband without direct contact. (BMD.15)

C. Cargo Security

- Improved screening and examination by non-intrusive inspection - in particular, the ability to detect or identify contraband items (for example, drugs, money, illegal firearms), threat materials, or stowaways; improve penetration, resolution, throughput, contrast sensitivity, reliability, mobility, and interoperability; and integrate with future Automated Target Recognition capability. (BMD.16)

- Increased information fusion, anomaly detection, Automatic Target Recognition, and response capability – in particular, automated imagery detection capability for anomalous content (e.g., stowaways, hidden compartments, contraband), and the ability to detect anomalous patterns in shipping data. (BMD.17)

- Improved detection, and identification of WMD materials and contraband – in particular, the ability to detect chemical and biological threats, explosives, and contraband. (BMD.18)

- Capability to screen 100 percent of air cargo. (BMD.19)

- Track domestic high-threat cargo – in particular, the ability to track DHS-designated Toxic Inhalation Hazardous (TIH) cargos in domestic transit. (BMD.20)

- Detect intrusion or unauthorized access, positively identify cargo, and provide timely response – in particular, in containerized, palletized, parcel, or bulk/break-bulk maritime and air cargo. (BMD.21)

Chemical and Biological Division (CBD.0) analyses and countermeasures, including improved characterization and prioritization of threats, innovative or revolutionary methods for surveillance and detection for early attack warning that minimize exposure and speed treatment of victims, new forensic methods to support attribution, and novel concepts for decontamination and restoration, agrodefense, and food defense. It is important to note that the division does not fund research on human clinical applications.

Topical Areas of strategic interest include:

Chemical and Biological Research & Development

- **Improved Informatics and Design for Biological and Chemical Analysis** (CBD.1) – (1) Bioinformatics and chemical analytics research that leads to significantly higher success rates for assay design. (2) Research to improve the depth and speed of data analysis and enhance access to (and indexing of) large datasets; particularly bioinformatics data structures as well as genotypic and phenotypic data.

- **Improved Sampling** (CBD.2) – (1) Research in the areas of biological particle capture and "real-time" analysis to support future development of technology that distinguishes between putative threat and non-threat agents; (2) research that develops fundamental understanding of sample collection to improve selectivity; (3) research that improves transfer efficiency of agents from the environment to detectors or instruments; and (4) research that improves organism collection and preservation by 70% viability or greater.

- **Sample Preparation** (CBD.3) – (1) Research that improves the ratio of analyte of interest to background contaminant (AoI:BC) for chemical and/or biological threats; and (2) research that helps to improve and define the quality of samples that emerge from sample preparation in ways that are substantive to either instrumental or assay style analysis.

- **Assays** (CBD.4) – Research to develop fundamental understanding and methodologies supporting assay chemistries that may potentially address the full spectrum of biological agents: (1) traditional threat agents; (2) agents that have been enhanced with known biological content; (3) agents that have emerged via natural selection; and (4) agents that are purely synthetic in nature. Ultimately, this research should allow comparisons against highly flexible databases of information that enable unique identification of threat agents. Research toward assay chemistries that permit reliable differentiation between environmental contaminants and chemical/biological threat agents is also of interest.

- **Instruments and Detection** (CBD.5) – Development, prototyping, and improvement of products and systems that are capable of detecting chemical and biological weapons, agents, and/or toxic industrial chemicals in aerosol, liquid, or environmental matrices, to support the following needs

  - ✓ Rapid detection and identification of an agent immediately after its release into the environment
  - ✓ Characterization and detection of novel, engineered, and emerging biological agents
  - ✓ Trace quantity detection of an agent to support decontamination efforts
  - ✓ Identification of a concealed agent or dispersal device prior to its release

- **Response and Recovery Research** (CBD.6) – Research aimed at enhanced understanding of chemical mechanisms and interactions with the environment and with operationally-relevant surfaces that will enable affordable and effective decontamination of emerging chemical threats and biological agents over wide areas.

Threat Characterization & Attribution

- **Integrated Chem Bio Rad Nuclear Explosives (ICBRNE) Program** (CBD.7) – Prototype and pilot demonstration applications related to sharing of WMD sensor data and related information at the state, local, and federal level utilizing open standards and protocols.

- System Studies (CBD.8) – Research to conduct studies and analysis to identify gaps in technology and operational concepts and to support formulation of requirements for chemical and biological countermeasure development. Current specific areas of interests are food and transit system defensive architectures.

- Bioforensics R&D Program (CBD.9) – Supports research and development of next generation and novel technologies to characterize biological threat agents (BTAs) for source attribution in support of FBI/NBFAC requirements in a criminal investigation. These include novel applications of next generation technologies to characterize the organism or the sample matrix. Please refer to specific BAA releases for future submissions.

Agro Defense

- Enhanced countermeasures for foreign animal disease (FAD) pathogens affecting domestic food animals, including molecular-based vaccines, immunotherapeutics, and novel agents with immune-based mechanism of action. (CBD.10)

- Laboratory-based and field deployable/point of care, rapid detection and diagnostic next generation technologies (e.g. arrays, nanotechnology, biosensors) to facilitate foreign animal disease outbreak prevention, response and recovery. (CBD.11)

- Efforts that address critical limitations in the current generation of foreign animal disease simulation models for high priority pathogens, including but not limited to the level of detail and parameterization required to adequately describe the diversity and complexity of the U. S. livestock system and the derived conceptual model, verification of the conceptual model versus its computer implementation, strategies for model validation versus the real world especially in a data poor environment, and the impact of data limitations at all levels of the modeling process. (CBD.12)

Command, Control, & Interoperability (CID.0) includes research and development that creates and deploys information resources – standards, frameworks, tools, and technologies – to enable seamless and secure interactions among homeland security stakeholders. Concepts, prototypes and other technologies that strengthen capabilities to communicate, share, visualize, analyze, and protect information.

- Research into the development of interoperable devices and systems to improve voice and data communications; information sharing; and collaboration between emergency response personnel at the federal, state, and local level. (CID.1)
- Research for advanced information assurance and other cyber security technologies to secure the Nation's current and future cyber infrastructure. (CID.2)
- Innovative forensic technologies to increase the operational efficiency and create new capabilities for criminal and terrorist investigations. (CID.3)

- Research for advanced reconnaissance and surveillance technologies for law enforcement personnel. (CID.4)

Explosives Countermeasures (EXD.0) includes the detection, mitigation, and response to explosive threats including: all modes of transportation within the Transportation Systems Sector (Aviation, Maritime, Mass Transit, Highway, Freight Rail, and Pipeline), in checked and carry-on baggage, Home Made Explosives (HME), improvised explosive devices (IEDs) – vehicle borne (VBIED) and person borne (PBIED), and response and defeat technologies.

- **Standoff Detection of Explosives** (EXD.1): Technologies for the standoff detection of explosives and explosive devices related to Person and Vehicle Borne Improvised Explosive Devices. Explosives of interest include commercially available explosives (i.e. Ammonium Nitrate based), conventional military explosives (i.e. Composition C-4 and Semtex A/H) and homemade explosives (i.e., peroxide base). Standoff Detection implies that both the detection equipment and operator be located at some distance (>1 m up to tens of meters) away from the subject or object under interrogation. Subtopics include:
  1) Integration of both multimodal and multispectral technologies for improved detection and/or imaging metrics.
  2) Development of automated detection and/or identification capabilities associated with both imaging and spectroscopy based technologies.
- **Cargo Security** (EXD.2) includes detecting intrusion or unauthorized access, positively identify cargo, and provide timely response – in particular, in containerized, palletized, parce., or bulk/break-bulk maritime, air cargo, and freight rail.
- **Test and Evaluation Expertise and Facilities for Counter-IED detection technologies** (EXD.3). Standoff, Remote, and Checkpoint based explosives detection systems, to be evaluated, most often require real explosives and local storage of said explosives. Facilities must be able to store, on-site, small amounts (< 1 pound) of various solid explosives, while achieving clean, uncontaminated facilities for equipment testing. Facilities must be able to accommodate non-eye safe laser ranges, x-ray based screening equipment, and neutron-based screening equipment. Facilities must also be able to accommodate, in certain cases, large, outdoor vehicle borne IED screening equipment.
- **Defeat of Improvised Explosive Devices** (EXD.4): Develop a means/method to attach an explosives access/neutralization charge to the external or internal surface of a vehicle or structure that is suspected of carrying or housing a terrorist explosive device. The means/method will allow for easy placement by a robotic platform, will allow for repositioning, and will support up to 100lbs. The means/method should be capable of adhering to glass, metal, wood, Fiber Reinforced Plastic (FRP), and concrete. Any means/method that proposes to use rope/ropelike items or double-sided adhesive tape is not acceptable.

Develop a tele-robotic manipulator that is capable of "fine motor" control for use in neutralizing an Improvised Explosive Device (IED). The system must be capable of precision actions such as cutting a wire, moving small components, opening small compartments, etc. The system must be mounted on or capable of being carried by a robot platform, is haptic sensitive, and weighs less than 25 lbs. The system should be self-powered, dual-armed and interoperable with the robotic platform Operator Control unit (OCU). The system should be capable of reaching up to 60".

- **Data Fusion and Automated Detection** (EXD.5) for aviation cargo, checked baggage, carry-on baggage, personal check points and all surface intermodal concerns. Algorithms and techniques for detection fusion and automated alerting that combines a variety of detection modalities, including but not limited to X-Ray, trace chemical detection, computed tomography (CT) and video.

- **Materials Science Research for Explosives Mitigation** (EXD.6): Fundamental materials science research directed toward improved understanding of the relative importance and cumulative effect of aging, stress history, corrosion cracking, materials manufacturing variability and threats on critical infrastructure materials.

- **Advanced Detection Technologies** (EXD.7): Development of robust, enhanced explosives detection methods such as bio-inspired molecular recognition techniques and other advanced sampling technologies to improve selectivity and sensitivity capabilities. Detection methods should be easily deployed, low cost and require minimum training to operate. Special attention should be paid to determining better sensing mechanisms and signal amplification mechanisms to apply to future detection improvements.

Human Factors/Behavioral Sciences (HFD.0) applies the social and behavioral sciences to improve detection, analysis, and understanding of threats posed by individuals, groups, and radical movements; develops novel technologies and tools to improve the recognition of individuals; supports the preparedness, response, and recovery of communities impacted by catastrophic events; and advances national security by integrating human factors and public perceptions data into homeland security technologies.

- Methods, models and technologies to enhance community resilience in the face of human- or nature-caused catastrophes through such means as better understanding of risk perception, improved risk communication by emergency responders and public officials, programs of pre-event education and training and applied theoretical and empirical research into the properties of resilient social networks, including more effective ways of mapping and linking emergency response, longer term recovery teams and other organizations within and across the public, faith-based, NGO and private commercial sectors. (HFD.1)

- Research into metrics related to resilience, including the creation of validated metrics measuring the psychosocial impact of large-scale disasters and catastrophes on affected individuals and communities and measures of the effectiveness of societal and community resilience efforts across physical, economic, social, psychological and cultural dimensions. (HFD.2)
- Research and technology to improve skill acquisition and human and team performance in the context of the human-machine interface, including research designed to achieve this end through better understanding of the range of fundamental human processes (physiological, neurological, behavioral, physical, and cognitive) that affect individual human and team performance. (HFD.3)
- Research into terrorist motivations, intent, recruitment, mobilization, and operations in order to develop a framework for assessing threats to the homeland, including the use of IEDs. (HFD.4)
- Tools and technologies to determine when radical groups are likely to engage in violence, and what ideological, organizational, and contextual factors may influence violent action. (HFD.5)
- Methods for non-invasively identifying deceptive and suspicious behavior within a time constrained, low-base rate, screening environment, and methods for identifying interactive strategies optimal for eliciting disguise-resistant indicators of deceptive and suspicious behavior, including technologies that automate or aid in such identification. (HFD.6)
- Protocols and technologies to minimize insider threats and to identify insider threat behavior when it occurs, especially in settings like transportation security or at a border. (HFD.7)
- Improvements in biometrics, including real-time positive verification of individual identity using multiple biometrics; mobile biometrics screening capabilities, to include hand-held, wireless, and secure devices; and high-speed, high-fidelity ten-print capture. (HFD.8)
- Research into the limits and potential of biometrics, including data collections, analyses, and medical studies to evaluate the stability of biometric indicators over time, uniqueness within the human population, and potential sensor dependencies; evaluations of the cryptographic strength of biometrics in security applications when combined with passwords, PINS, public key infrastructure (PKI) and traditional data security methods; tools to create synthetic biometric data to protect privacy for research data sets used in algorithm evaluations; the assessment of techniques to spoof or obfuscate biometric technologies; and the development of standards and test/evaluation protocols. (HFD.9)

Infrastructure and Geophysical (IGD.0): Technologies for identifying and mitigating all hazard vulnerabilities of the 18 critical infrastructure/key assets, and technologies for improving the preparedness and response for Federal, State, Local, Tribal governments, first responders and the private sector, to all-hazards events impacting the U.S. population, critical infrastructure, and all modes of transportation within the Transportation Systems sector.

- Offshore wide area persistent surveillance for cueing incoming threats to enable pre-emptive response. (IGD.1) *(Also has a Borders and Maritime element)*
- Integrated incident management components and systems to improve public and first responder safety. (IGD.2) *(Also has a Command, Control and Interoperability element)*
- Concepts, methodologies, and/or technologies to anticipate, prepare for and/or mitigate the impact of catastrophic geophysical phenomena. (IGD.3)
- Concepts, methodologies, and/or technologies for enhancing security, resilience, and recovery of the 18 critical infrastructure sectors for new and retrofit applications. (IGD.4) *(Also has a Borders and Maritime Security element)*
- Concepts, methodologies, and/or technologies to improve protection of or enhance performance of responders as they carry out life-saving tasks. (IGD.5)
- Geospatial technologies that enhance protection of critical infrastructure and improve management of incidents at federal, state and local levels. This includes concepts and technologies for protecting and mitigating vulnerabilities to the critical Civil Infrastructure of human operators, maintainers, and developers responsible for the reliable functioning of the Nation's physical infrastructure and key resources. (IGD.6) *(Also has a Human Factors element)*
- Concepts, methodologies, and/or technologies to improve protection of or enhance performance of responders as they carry out life-saving tasks. (IGD.7)
- Concepts, techniques, methodologies, algorithms, and cost effective sensors to mitigate multipath effects and to improve the performance of wireless mesh networks in challenging environments such as underground and GPS denied facilities. (IGD.8)
- Concepts, techniques, methodologies, and decision support algorithms for real time fusion of multi-source sensor measurements in order to produce actionable alarms for location/health monitoring and surveillance purposes. (IGD.9)
- Concepts, techniques, methodologies, algorithms, and innovative tools and applications to significantly enhance the quality of system analysis and to reduce the time/cost of conducting system analyses by ten fold. (IGD.10)
- Modeling, Simulation, and Analysis (IGD.11)
- Cyber-physical Systems Security (IGD.12)

For instructions on submitting a White Paper or Full Proposal, please refer to S&T LRBAA 10-01, PART II, Para. IV, APPLICATION AND SUBMISSION INFORMATION.

DHS S&T reserves the right to select for award and fund all, some, or none of the Full Proposals received in response to this Announcement. If an award decision is made, a negotiation process will determine how much of the selected Proposal is actually funded. A Proposal may be selected, but only specific portions of it may be of interest to DHS S&T.

Part II:

TECHNICAL SUBMISSION PROCESS

LONG RANGE BROAD AGENCY ANNOUNCEMENT

BAA 10-01

FOR

THE DEPARTMENT OF HOMELAND SECURITY

SCIENCE AND TECHNOLOGY DIRECTORATE

INTRODUCTION:

This is a Long Range Broad Agency Announcement (LRBAA) as contemplated in Federal Acquisition Regulation (FAR) 6.102(d) (2) and 35.016. A formal Request for Proposal (RFP) will not be issued.

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Multiple awards are anticipated to be issued through this BAA and will be based on an assessment of the overall best value to the government. Awards will be made based upon the proposal evaluation, funds availability, and other programmatic considerations. Awards may take the form of contracts, grants, cooperative agreements, or other transaction agreements (OTAs). Therefore, the applicable laws and regulations governing the legal vehicle used for award will depend on the legal vehicle chosen by DHS S&T. In the event an Offeror or subcontractor is a Federally Funded Research and Development Center (FFRDC), Department of Energy National Laboratory, or other Federally funded entity, DHS S&T will work with the appropriate sponsoring agency to issue an interagency agreement pursuant to the Economy Act (31 U.S.C. 1531) or other appropriate authority.

DHS S&T also issues Targeted BAAs. Given the intentionally broad scope of the Long Range BAA, we encourage you to first consult the open Targeted BAAs. If none of these Targeted BAAs relate to your interests and goals, then we encourage you to carefully consider how such interests and goals address DHS capability gaps identified in Part I of this Announcement. Your conclusions based on this analysis must be clearly articulated in your submission.

This document is Part II of the Long Range BAA. Part I of this BAA contains the Technical areas of interest and Divisional requirements. **Please refer to Part I to determine if your specific area of interest will assist a DHS Division in fulfilling its goals.** If you conclude that your idea will be of interest to DHS S&T, please print Part II (this document), which guides Offerors through the Long Range BAA submission process. Part II provides details on what must be included in your White Paper or Full Proposal, explanations of how to submit and steps in the process, as well as the evaluation Factors and elements.

Ethical Considerations Regarding Competitive Information

Once a White Paper or a Full Proposal has been submitted, the evaluation period remains active and pending until the LRBAA BAA Contracting Officer issues an official notification letter to the Offeror. At any point in time during the evaluation period, no communication shall occur between S&T personnel and the Offeror regarding the submission or its general subject matter, except as noted below.

During the evaluation period, the LRBAA Contracting Officer must be the focal point of any exchange with Offerors. The LRBAA Coordinator may be contacted via email solely for administrative assistance and guidance regarding the submission process, status updates, or administrative matters.

If you feel it is in your best interest to pursue projects for which blueprint requirements are specified, please refer to one of the open Targeted BAAs.

I. GENERAL INFORMATION

Points of Contact:

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1. **Catalog of Federal Domestic Assistance (CFDA) Number** – 97.065

2. **Catalog of Federal Domestic Assistance (CFDA) Title** – Homeland Security Advanced Research Projects Agency

3. Other Information – This Announcement is restricted to work relating to basic and applied *research* and that portion of advanced technology development *not* related to a specific system or hardware procurement. Purchase of capital equipment for experimental research may be allowed provided that such purchase fulfills DHS requirements and represents significant benefit to the Government. Contracts, grants, cooperative agreements, and other transaction agreement awards made under this BAA are for scientific study and experimentation directed towards advancing the state-of-the art or increasing knowledge or understanding.

THIS ANNOUNCEMENT DOES NOT COVER SUPPORT SERVICES, such as technical services, engineering services, or other kinds of support services. Submissions indicating this intent will be rejected for non-compliance by the Long Range BAA Advisory Board and receive no further consideration. The Contracting Officer will send a letter stating the submission was non-compliant with the scope of this LRBAA.

II. AWARD INFORMATION

The award value and period of performance of each selected Full Proposal will vary depending on the research area and the technical approach to be pursued by the selected Offeror.

Offerors who seek to extend, through this LRBAA, work previously completed must clearly articulate where the old work ended, where the new work begins, and what new advances are expected from the work contemplated under this BAA. Please ensure it is clear that the work now being submitted is independent of previous work (i.e. the next logical step in the research, or investigating a situation that was discovered and not funded under the previous award). Submitting existing Statements of Work and indicating which steps have been completed is not sufficient justification for an independent award under the LRBAA.

DHS S&T reserves the right to select for award and fund all, some, or none of the Full Proposals received in response to this Announcement. If an award decision is made, understand that a negotiation process will determine how much of the selected proposal is actually funded. *A proposal may be selected, but only specific portions may be of interest.*

III. ELIGIBILITY INFORMATION

This LRBAA is open to ALL responsible sources. Foreign or foreign-owned Offerors are advised that their participation is subject to foreign disclosure review procedures, applicable export control laws, and other applicable Federal laws, regulations, and policies pertaining to U.S Government business with foreign entities.

Offerors may include single entities or teams from private sector organizations, Government laboratories, airport authorities, Federally Funded Research and Development Centers (FFRDCs), and academic institutions.

Federally Funded Research & Development Centers (FFRDC's), including the Department of Energy National Laboratories and Centers, are eligible to respond to this LRBAA, individually or as a team member of an eligible principal Offeror, as so long as they are permitted to respond to Announcements/solicitations such as this under the applicable sponsoring agreement between the Government and the specific FFRDC.

Historically Black Colleges and Universities (HBCU), Minority Institutions (MI), Small Business concerns, Small Disadvantaged Business concerns, Women-Owned Small Business concerns, Veteran-Owned Small Business concerns, Service-Disabled Veteran-Owned Small Business concerns, and HUBZone Small Business concerns are encouraged to submit proposals and to join other entities as team members in submitting proposals.

Independent organizations and teams are encouraged to submit proposals. 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 DHS S&T.

Organizational Conflict of Interest issues will be evaluated on a case-by-case basis as outlined below. Offerors who have existing contract(s) to provide scientific, engineering, technical and/or administrative support directly to DHS S&T will receive particular scrutiny.

Organizational Conflict of Interest:

(a) Disclosure. In a Full Proposal submission, Offerors must represent to the best of their knowledge: (1) whether any of their current employees were previously employed at DHS S&T, and whether any of their former employees are now DHS S&T employees; (2) awareness of any facts that create any actual or potential organizational conflicts of interest relating to the award of this contract; and (3) full disclosure of all current information bearing on the existence of any actual or potential organizational conflicts of interest, and including a mitigation plan in accordance with paragraph (d) of this provision.

(b) Determination. The Contracting Officer may determine that this effort may result in an actual or potential conflict of interest, or may provide one or more Offerors with the potential to attain an unfair competitive advantage based on the information provided or based on knowledge of the Contracting Officer.

(c) If any such conflict of interest is found to exist, the Contracting Officer may (1) disqualify the Offeror, or (2) determine that it is otherwise in the best interest of the United States to contract with the Offeror and include the appropriate provisions to mitigate or avoid such conflict in the contract awarded. After discussion with the Offeror, the Contracting Officer may determine that the actual conflict cannot be avoided, neutralized, mitigated, or otherwise resolved to the satisfaction of the Government, and the Offeror may be found ineligible for award.

(d) Mitigation/Waiver. If an Offeror with a potential or actual conflict of interest or unfair competitive advantage believes it can be mitigated, neutralized, or avoided, the Offeror may submit a mitigation plan to the Contracting Officer for review. Award of a contract where an actual or potential conflict of interest exists shall not occur before Government approval of the mitigation plan.

(e) Other Relevant Information. In addition to the mitigation plan, the Contracting Officer may require further relevant information from the Offeror. The Contracting Officer will use all information submitted by the Offeror, and any other relevant information known to DHS, to determine whether an award to the Offeror may take place, and whether the mitigation plan adequately neutralizes or mitigates the conflict.

(f) Corporation Change. The successful Offeror shall inform the Contracting Officer within thirty (30) calendar days of the effective date of any corporate mergers, acquisitions, and/or divestures that may affect this provision.

(g) Flow-down. The contractor shall insert the substance of this clause in each first tier subcontract that exceeds the simplified acquisition threshold.

IV. APPLICATION AND SUBMISSION INFORMATION

1. Application and Submission Process -

Oral Presentations – Prospective Offerors are NOT provided the opportunity to make oral presentations as part of the submission process for the LRBAA.

Submitting a response to this BAA:

A. Submission instructions for the BAA Website.

Offerors and their organizations shall register at https://baa.st.dhs.gov to participate in this LRBAA. White Paper and Full Proposal submissions will not be accepted from unregistered organizations. There will be no exceptions. It is very important to follow the registration instructions. Offerors shall coordinate with all members of their team to ensure the registration process is done correctly.

To begin the registration process, go to https://baa.st.dhs.gov and select BAA 10-01 from the list on the left side of the screen. Next, select the appropriate topic area. Upon proper selection, buttons for registration and submission will appear. Select the appropriate registration button and fill in the requisite fields, then submit your registration for White Paper (or Full Proposal) submission.

Once this registration process is complete, registrants will receive a control identification number via email. This control number is necessary to begin the White Paper submission process. It is not used internally at DHS to track your paper. Upon receipt of your submission through the Website, a sequential number is assigned to your submission for tracking purposes. You will receive this reference number in an email confirming your submission, and it should be cited in future correspondence concerning your submission.

Submission of a White Paper is Mandatory. Offerors shall first submit a White Paper, as specified below, prior to submitting a Full Proposal. If an Offeror submits a Full Proposal directly without first submitting a White Paper, the Full Proposal will be rejected as non-compliant with the requirements of this LRBAA and will not be evaluated.

To submit a White Paper, select the appropriate submission button, fill out the requisite fields, upload the files and then submit. Again, users will receive confirmation of their submission via email. There is no limit to the number of White Paper submissions per Offeror; however, if a White Paper or Full Proposal is not accepted, do not resubmit the same White Paper or Full Proposal under this LRBAA with the intent to have another division evaluate it. The Advisory Board (AB) pre-screens all submissions and will reject a submission that does not comply with the LRBAA instructions.

The AB then forwards compliant submissions to the relevant division(s) and SMEs to evaluate in accordance with the evaluation factors as stated within this Announcement.

In teaming situations, the lead organization must remain the same on both the White Paper and, if selected, the Full Proposal. Any Full Proposal submitted by entities that were not the prime for the White Paper submission will be considered non-compliant and rejected.

For either White Papers or Full Proposals, only unclassified volumes are to be submitted via the LRBAA Website.

The official evaluation period commences when a White Paper or a Full Proposal is submitted through the LRBAA's official Website. For the duration of an evaluation period, communications must cease between SME/Division personnel and the Offeror with regard to its LRBAA submission.

The evaluation period officially ends when a DHS S&T Contracting Officer issues a notification letter via email. Only a DHS S&T Contracting Officer can issue this notification letter. In addition, only a DHS Contracting Officer will communicate with an Offeror whose evaluation is pending if and when specific facts in the submission require further clarification, e.g., confirmation of a delivery date.

The website will be modified to not accept a Full Proposal unless there is an accompanying White Paper number. To remain impartial and not provide any Offeror with information not available to all potential Offerors, once a White Paper is submitted by the Offeror, SMEs/Division personnel will not be permitted to engage in a discussion regarding the content of the White Paper, except as provided below.

The only exceptions will be handled by the Contracting Officer who may contact the Offeror for clarification on a specific statement, like a delivery date (as an example).

If the Offeror receives a notification of encouragement to submit a Full Proposal, the SME/Division personnel and the Offeror may discuss the scope of work, and resources required to execute the scope, and must include a Contracting Officer in this process. Price SHALL NOT be discussed.

If an Offeror is discouraged from submitting a Full Proposal based upon SME/Division review of the Offeror's White Paper, the Offeror is still not precluded from submitting a Full Proposal.

However, an Offeror whose White Paper is not selected may ***not*** contact the SME/Division after receiving notification.

Please note that a **Full Proposal** is admissible and evaluated **only** after its corresponding White Paper has first been evaluated.

Once the Full Proposal has been submitted, all dialogue between SME/Division personnel and the Offeror must cease. Any communication between the Offeror and DHS at that point must only occur via the Contracting Officer. Communication between the Offeror and the SME/Division personnel may resume only after the Contracting Officer's Notification Letter has been issued to the Offeror and must involve a Contracting Officer.

A Full Proposal comprised of a detailed Technical and Cost Proposal will be subsequently encouraged from those Offerors whose proposed technologies have been selected through the aforementioned notification as being of "particular value" to DHS S&T. However, any such selection does not assure a subsequent award.

Due to the large number of White Papers typically submitted, DHS S&T may not offer debriefings to Offerors who are not encouraged to submit a Full Proposal.

Full Proposal submissions will be protected from unauthorized disclosure in accordance with FAR 15.207, applicable law, and DHS regulations. Offerors are expected to appropriately mark each page of their submission that contains proprietary information.

Submitting Classified Documents: For classified submissions, see Section IV, Paragraph 5 below for handling instructions; additionally, Offerors shall submit to the website a placeholder portable document format (PDF) file consisting of a single page with the words "Classified Volume Forthcoming" in the center of the page.

This Announcement will remain open until December 31, 2010, 11:59 PM, Eastern Standard Time (EST), during which time White Papers and Full Proposals may be submitted in accordance with Section IV, Paragraph 1, of this Announcement. Submissions received after this date will be processed and evaluated according to the guidelines of a new Long Range BAA if and when it is published.

White Papers or Full Proposals will not be accepted for this particular BAA after December 31, 2010, 11:59 PM, EST, with the exception of a Full Proposal that resulted from a White Paper Selected near that date. A new deadline will be provided to these select Offerors, and their subsequent submissions will subject to the current year's LRBAA 10-01 guidelines.

2. Content and Format of White Papers/Full Proposals -

The Proposals submitted under this BAA are expected to be unclassified. However, classified proposals are permitted. All proposal submissions will be protected from unauthorized disclosure in accordance with FAR 15.207, applicable law, and DHS regulations. Offerors are expected to appropriately mark each page of their submission that contains proprietary information.

White Paper Format and Content

- Offerors shall use the Format included as Appendix 1 to this LRBAA.
- The following link to the Help section of the U.S. Grants website offers some valuable resources for file-conversion needs:
- Classified volumes must follow the same submission process as provided below in Section IV, Paragraph 5; additionally, Offerors shall submit to the website a placeholder PDF file consisting of a single page with the words "Classified Volume Forthcoming" in the center of the page.
- Cover Sheet - The Cover Sheet is automatically generated during the submission of the White Paper to the BAA website.
- Include a statement specifying compliance with FAR Clause 52.222-54 "Employment Eligibility Verification".

Full Proposal Format – Volume 1: Technical and Volume 2: Cost Proposal

- Paper Size – 8.5 x 11 inch paper
- Margins – 1 inch
- Spacing – single or double-spaced
- Font – Times New Roman, 12 point
- Number of Pages – Volume 1 is limited to no more than 40 single-sided pages. Volume 2 has no page limitations. Limitations within sections of the Technical Proposal are indicated in the individual descriptions shown below. The cover page, table of contents, and resumes are excluded from the page limitations. *See description of a cover page and cover sheet below.*
- Files are not to exceed 10 megabytes in size. A proposal shall consist of ONE electronic file in portable document format (PDF), readable by IBM-compatible personal computers (PCs) and excel spreadsheet (include all calculations).

- Full Proposals exceeding the page/file size limit may not be evaluated and shall be considered unresponsive.
- Classified volumes must follow the same submission process as provided below in Section IV, Paragraph 5; additionally, Offerors shall submit to the website a placeholder PDF file consisting of a single page with the words "Classified Volume Forthcoming" in the center of the page.

Full Proposal Content

Volume 1: Technical Proposal

Volume 1 of the Full Proposal must include the following sections.

- Cover Sheet: The Cover Sheet is automatically generated during the submission of the White Paper to the BAA website. *This is not the same as the Offeror's Cover Page.*
- Cover Page: This shall include the words "Technical Proposal" and the following:

  1) BAA Number 10-01
  2) Title of Proposal
  3) Topical Area and its reference code (as described in *Part I, Paragraph 5*);
  4) Identity of prime Offeror's name and address and complete list of subcontractors name and address, if applicable;
  5) Technical contact (name, address, phone/fax, electronic mail address);
  6) Administrative/business contact (name, address, phone/fax, electronic mail address); and,
  7) Duration of effort (separately identify the basic effort and any options)
  8) DHS S&T Point of Contact (name of the S&T individual that was contacted prior to submission). A list of organizations is provided in Section I, Paragraph 6 of this BAA.
  9) Dunn & Bradstreet Number;
  10) Acknowledgement the Offeror is registered in Central Contractor registration (CCR);
  11) Statement specifying compliance with FAR Clause 52.222-54 "Employment Eligibility Verification".
  12) Identify any proposed personnel or subcontractors that are not U.S. citizens.

- Official Transmittal Letter: This is an official transmittal letter with authorizing official signature. For an electronic submission, the letter can be scanned into the electronic proposal. The letter of transmittal shall state whether this proposal has been submitted to another government agency, other than DHS S&T, and if so, which one and when.

- Table of Contents

- Executive Summary: Summarize the proposal and the expected benefits of the solution.

- Proposed Use for DHS S&T: A detailed summary of how the proposal's product(s) supports the targeted end user (e.g., the first responder community) in an operational context. Include quantitative specifications for how the products will improve operational performance.

- Technical Concept: A description of the technical concept, including anticipated risks and approaches to mitigate the risks. Describe the basic scientific or technical concepts that will be used in each component or subsystem comprising your proposed solution to the problem described above. What particular scientific, technical and/or engineering issues need to be addressed and resolved to demonstrate feasibility? What is unique about your solution and what advantages might it afford compared to alternative approaches others have taken? What has been the extent of the Principal Investigators' past experience in, and qualifications or educational background for, developing the technologies in your proposal?

- Operational Concept: – A description of the operational concept used in the proposed technical solution to accomplish the objectives. Explain how the performance of your proposed solution can be expected to meet or exceed and be measured against each of the specific technical attributes and/or performance enhancements. What are the key scientific, technical, or engineering challenges and the timing for each that must be met in order to successfully complete this project? Describe all required material and information, which must be provided by the Government to support the proposed work.

- Operational Utility Assessment Plan: – A plan for demonstrating and evaluating the operational effectiveness of the Offeror's products in exercises, including evaluation metrics. Explain your view of the requirements gap to be filled, what capability will be provided upon successful completion of the proposed effort, and what are the technical risks associated with successful maturation of the proposed effort to achieve operational utility. Discuss the critical path technologies or key technical challenges you will face when building this system or component and your plans for meeting these challenges. Explain how you will demonstrate the system or component performance relative to the performance or enhancement goals described in the proposal.

- Statement of Work: A Statement of Work (SOW) and a Work Breakdown Structure (WBS) clearly detailing the scope and objectives of the effort, the technical approach, and the performance goals. It is anticipated that the proposed SOW and WBS will be incorporated as an attachment to the resultant award instrument. Therefore, the Proposal must include a severable stand-alone SOW and WBS without any proprietary restrictions. The WBS must include a detailed listing of the technical tasks/subtasks in hierarchical fashion for the tasks required to accomplish the effort. The WBS format must be complete to at least WBS level 3. Each task in the SOW shall describe the work to be carried out, the end result of the task, the time allocated, the organization performing the task, the predecessor tasks, the performance goals of the task, and the resources (labor, materials, and services) required. The resources shall be costed to provide a baseline budgeted cost for the applicable task. The SOW shall be at a level sufficient to define the nature of the work to be carried out, measure progress, and understand the relationship of the tasks to one another.

- Project Schedule and Milestones: A summary of the schedule of events and milestones. If applicable, identify the critical path.

- Assertion of Data Rights: Include here a summary of any assertions to any technical data or computer software that will be developed or delivered under any resultant award. This includes any assertions to pre-existing results, prototypes, or systems supporting and/or necessary for the use of the research, results, and/or prototype. Any rights asserted in other parts of the proposal that would impact the rights in this section must be cross-referenced. If less than unlimited rights in any data delivered under the resultant award are asserted, the Offeror must explain how these rights in the data will affect its ability to deliver research data, subsystems, and toolkits for integration as set forth below. Additionally, the Offeror must explain how the program goals are achievable in light of these proprietary and/or restrictive limitations. If there are no claims of proprietary rights in pre-existing data, this section shall consist of a statement to that effect.

Proposals submitted in response to this Announcement shall identify all technical data or computer software that the Offeror asserts will be furnished to the Government with restrictions on access, use, modification, reproduction, release, performance, display, or disclosure. Offeror's pre-award identification shall be submitted as an attachment to its offer and shall contain the following information:

(1) *Statement of Assertion.* Include the following statement: "The Offeror asserts for itself, or the persons identified below, that the Government's rights to access, use, modify, reproduce, release, perform, display, or disclose only the following technical data or computer software should be restricted:"

(2) *Identification of the technical data or computer software to be furnished with restrictions.* For technical data (other than computer software documentation) pertaining to items, components, or processes developed at private expense, identify both the deliverable technical data and each such item, component, or process as specifically as possible (e.g., by referencing specific sections of the proposal or specific technology or components). For computer software or computer software documentation, identify the software or documentation by specific name or module or item number.

(3) *Detailed description of the asserted restrictions.* For each of the technical data or computer software identified above in paragraph (2), identify the following information:

(i) Asserted rights. Identify the asserted rights for the technical data or computer software.

(ii) Copies of negotiated, commercial, and other non-standard licenses. Offeror shall attach to its offer for each listed item copies of all proposed negotiated license(s), Offeror's standard commercial license(s), and any other asserted restrictions other than Government purpose rights; limited rights; restricted rights; rights under prior government contracts, including SBIR data rights for which the protection period has not expired; or government's minimum rights.

(iii) Specific basis for assertion. Identify the specific basis for the assertion. For example:

(A) Development at private expense, either exclusively or partially. For technical data, development refers to development of the item, component, or process to which the data pertains. For computer software, development refers to the development of the software. Indicate whether development was accomplished exclusively or partially at private expense.

(B) Rights under a prior government contract, including SBIR data rights for which the protection period has not expired.

(C) Standard commercial license customarily provided to the public.

(D) Negotiated license rights.

(iv) Entity asserting restrictions. Identify the corporation, partnership, individual, or other person, as appropriate, asserting the restrictions.

(4) *Previously delivered technical data or computer software.* The Offeror shall identify the technical data or computer software that are identical or substantially similar to technical data or computer software that the Offeror has produced for, delivered to, or is obligated to deliver to the Government under any contract or subcontract. The Offeror need not identify commercial technical data or computer software delivered subject to a standard commercial license.

(5) *Estimated Cost of Development.* The estimated cost of development for that technical data or computer software to be delivered with less than Unlimited Rights.

(6) *Supplemental information.* When requested by the Contracting Officer, the Offeror shall provide sufficient information to enable the Contracting Officer to evaluate the *Offeror's assertions.* Sufficient information must include, but is not limited to, the following:

a. The contract number under which the data or software were produced;

b. The contract number under which, and the name and address of the organization to whom, the data or software were most recently delivered or will be delivered; and

c. Identification of the expiration date for any limitations on the Government's rights to access, use, modify, reproduce, release, perform, display, or disclose the data or software, when applicable.

(7) *Ineligibility for award.* An Offeror's failure to submit or complete the identifications and assertions required by this provision with its proposal may render the Offeror ineligible for award.

Please Note: The section entitled "Assertion of Data Rights", must be severable, i.e., it must start on a new page. It is anticipated that the proposed Assertion of Data Rights section will be incorporated as an attachment to the resultant award instrument. Proposals must include a severable self-standing Assertion of Data Rights section without any proprietary restrictions, which can be attached to the contract or agreement award.

- Deliverables: A detailed list and description of all deliverables and data deliverables the Offeror proposes to provide to the Government, the schedule for delivery, and acceptance criteria.

The Deliverables information must be a separate section in the Offeror's proposal and begin on a new page.

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It is anticipated that the proposed detailed list and description of all deliverables will be incorporated as an attachment to the resultant award document. Proposals must include a severable self-standing detailed list and description of all deliverables without any proprietary restrictions, which can be attached to the award document.

- Operational Utility Assessment Plan: A detailed plan for demonstrating and evaluating the operational effectiveness of the Offeror's products in exercises, including evaluation metrics. Explain your view of the requirements gap to be filled, what capability will be provided upon successful completion of the proposed effort, and what are the technical risks associated with successful maturation of the proposed effort to achieve operational utility. Explain your concept of how you will develop and demonstrate a system or system component. Identify and explain the critical path technologies or key technical challenges you will face when building this system or component and your plans for meeting these challenges. Explain how you will demonstrate the system or component performance relative to the performance or enhancement goals described in the proposal.

- Qualifications: A discussion of the Offeror's previous accomplishments and work in this area, or closely related area, and the qualifications of the investigators. If the proposal involves development or testing scientific and/or engineering concepts, the principal investigators must demonstrate education and/or managerial expertise in these fields. Key personnel resumes must be attached to the proposal and do not count toward the page limitations.

- Detailed Risk Mitigation Plan: Discuss in detail the technical, cost, and schedule risk(s) involved with the project and how each risk will be mitigated.

- Management Approach: A discussion of the overall approach to the management of the effort, including brief discussions of the total organization, use of personnel, project, function, and subcontractor relationships, government research interfaces, and planning, scheduling and control practice. Identify which personnel and subcontractors (if any) will be involved. Include a description of the facilities that are required for the proposed effort with a description of any Government-Furnished Equipment/Hardware/Software/Information required, by version and/or configuration.

- Small Business Considerations: If the prime Offeror is a large business, a commitment of the Offeror to the use of small business concerns. All Offerors shall indicate their business size status and list all subcontractors and its business size status. Include a Subcontracting Plan, if applicable.

VOLUME 2: Cost Proposal

- Cover Sheet: The Cover Sheet is automatically generated during the submission of the White Paper to the BAA website. *This is not the same as the Offeror's Cover Page.*

- The Cost Proposal must consist of a cover page and two parts.

- The following information must be provided for the basic and any proposed Option(s)

  Part 1 must provide a detailed cost breakdown of all costs by cost category by calendar and Government fiscal year. (Provide a time-phased spend plan)
  Part 2 must provide a detailed cost breakdown by task/sub-task using the same task numbers in the Statement of Work. (Provide Basis of Estimates – Contractor format is permitted)
  Identify any cost drivers
  Options must be separately priced

The cost of preparing White Papers and/or Full Proposals in response to this Announcement is not considered an allowable direct charge to any resulting contract or any other award, but may be an allowable expense to the normal bid and proposal indirect cost specified in FAR 31.205-18. The final allowability of costs shall be determined by the type of award vehicle used.

Note: In the event that an Offeror is selected for award, the Offeror may be required to submit certified cost or pricing data as a condition of award.

- Cover Page: The use of the SF 1411 is optional. The words "Cost Proposal" must appear on the cover page in addition to the following information:

    1) BAA Number 10-01
    2) Title of Proposal;
    3) Topical Area and reference code (see *Part I, Paragraph 5*);
    4) Identity of prime Offeror's name and address and complete list of subcontractors name and address, if applicable;
    5) Technical contact (name, address, phone/fax, electronic mail address)
    6) Administrative/business contact (name, address, phone/fax, electronic mail address);
    7) Duration of effort (separately price out the basic effort and any options) and;
    8) DUNS number and CAGE code.
    9) Statement on whether or not the Offeror has been audited by a Government organization (Defense Contract Audit Agency, Office of Naval Research, etc.), and if the Offeror has a Government-approved accounting system.
    10) DCAA Point of Contact (Name and email address)

Part 1: Detailed breakdown of all costs by cost category by calendar and Government fiscal year and include a summary explaining how each element is applied in the cost proposal:

- Direct Labor – Individual labor category or person, with associated labor hours and *unburdened* direct labor rates;

- Indirect Costs – Fringe Benefits, Overhead, G&A, COM, etc. (Must show base amount and rate);

- If available, a copy of the Offeror's Forward Pricing Rate Agreement (FPRA) or Defense Contract Audit Agency (DCAA) Approved and/or Recommended Rates. Identify if there are outstanding CAS violations.

- Travel – Separate by destinations and include number of trips, durations-number of days, number of travelers, per diem (travel costs, hotel and meals in accordance with the Federal Travel Regulations and FAR PART 31), airfare, car rental, if additional miscellaneous expense is included, list description and estimated amount, etc.;

- Subcontract – A cost proposal as detailed as the Offeror's cost proposal will be required to be submitted by the subcontractor. The subcontractor's cost proposal can be provided in a sealed envelope with the Offeror's cost proposal or will be requested from the subcontractor at a later date. The subcontractor's cost proposal must include on company letterhead the complete company name and mailing address, technical and administrative/business point of contacts, email address, and telephone number. Include the DUNS number. Include the DCAA Office and POC with telephone number.

- Consultant – Provide consultant agreement or other document which verifies the proposed loaded daily/hourly rate and labor category;

- Materials must be specifically itemized with costs or estimated costs. Where possible, indicate purchasing method (e.g., competition, engineering estimate, market survey, etc.). Include supporting documentation, i.e. vendor quotes, catalog price lists, and past invoices for similar purchases;

- Other Directs Costs (ODCs), particularly any proposed items of equipment or facilities. Equipment and facilities generally must be furnished by the Offeror. Justifications must be provided when Government funding for such items is sought.

- Fee/Profit including fee percentage.

- Provide a time-phased spend plan which includes all costs proposed, i.e., labor, travel, materials, and ODCs (contractor format is acceptable).

- Provide a basis of estimate (BOE) for all proposed labor. The BOE must provide the rationale for the proposed labor category(ies) and proposed labor hours for each labor category (contractor format is acceptable).

Part 2: Cost breakdown by task/sub-task using the same task numbers in the Statement of Work.

3. Significant Dates and Times -

This Announcement will remain open until December 31, 2010, 11:59 PM, HST, during which time White Papers and Full Proposals may be submitted in accordance with Section IV, Paragraph 1. Submissions received after this date and time will be processed and evaluated according to the 2011 Long Range BAA guidelines if and when they are published.

Evaluations and awards will occur on "rolling selection" basis. Generally, evaluations will occur within 60 days from receipt of the White Paper or Full Proposal. This is not a firm commitment to 60 days, as Subject Matter Experts must balance their simultaneous commitments and projects, which frequently require travel. Nevertheless, it is in everyone's best interest for the Long Range BAA to remain open for submissions throughout the year and, regardless of certain temporary circumstances, every effort will be made to conduct reviews as expediently as possible.

Contract awards resulting from a selected Full Proposal are projected to occur within approximately 90 days after award notification (i.e. approximately 150 days after submission), contingent upon successful negotiations and/or subject to availability of funds. Full Proposals submitted should cite a validity timeframe of 150 days.

4. Address for Submission of Classified White Papers and Full Proposals –

CLASSIFIED SUBMITTALS CANNOT BE TRANSMITTED VIA THE WEB SITE. Regardless, the submitter must first register online following the registration instructions provided in Section IV, Paragraph 1 to obtain a registration number. Offerors shall print out the registration form and attach it as a coversheet to the classified submittal located after the classification coversheet. Offerors shall submit to the website a placeholder PDF file consisting of a single page with the words "Classified Volume Forthcoming" in the center of the page. The classified submittal must be submitted via proper classified courier or proper classified mailing procedures as described in the National Industrial Security Program Operating Manual (NISPOM). Offerors may view the NISPOM document online at http://www.dss.mil/isec/nispom.htm. Classified submittals must include ten (10) printed copies and one electronic copy on compact disc recordable (CD-R) media (do not use re-writable media, e.g. CD-RW/RW-/RW+). Each copy must be accompanied by the coversheet, which does not count towards the page limitations described in Section IV, Paragraph 1.

Classified documents MUST be received by December 31, 2010, 11:59 PM, EST.

Classified proposals can be delivered by courier to:

Director of Security
Department of Homeland Security
Science and Technology Directorate
1120 Vermont Avenue NW
Room 10-112
Washington, DC 20005

Electronic copies can be emailed to: chris.featherston@dhs.sgov.gov

NOTE: Please send an unclassified alert email to christopher.featherston@dhs.gov and BAA@dhs.gov before emailing classified information to chris.featherston@dhs.sgov.gov.

Classification does not eliminate the requirement for Offerors to comply with all instructions and deadlines in this BAA.

5. Further Assistance Needed for this BAA

The applicable electronic address for all correspondence for this BAA is:

6. Proprietary Protection

S&T has contracted for various business and staff support services, some of which require contractors to obtain administrative access to White Papers, Full Proposals, and Offerors' presentations (all of which may include proprietary information). Contractors involved in providing technical assistance and administrative assistance to S&T have signed general non-disclosure agreements and organizational conflict of interest statements. Any objection to contractor access for purposes of technical assistance or administrative assistance must be in writing to the LRBAA Contracting Officer and shall include a detailed statement of the basis for the objection.

Proposals will be considered source selection information and will be protected accordingly, if appropriately marked. Proposals will be reviewed only by authorized Government representatives and assigned evaluators, which may include support contractors. Only Government representatives will make selection decisions.

V. EVALUATION INFORMATION

1. **White Papers and Full Proposals will be evaluated in accordance with the following Factors and elements.**

White Papers and Full Proposals will be evaluated according to the following Factors and elements. The elements are specified under each Factor. *Evaluation factors A and B listed below are of equal importance, and more important than Factors C, D, and E. Factors C, D, and E are listed in descending order of importance. Each element under its Factor is of equal weight within the Factor.*

A. Overall scientific and technical merits of the proposal.

1. The degree of innovation and potential to offer a revolutionary increase in capability or a significant reduction in cost commensurate with the potential risks of the innovative approach;
2. The soundness of the technical concept;
3. The Offeror's awareness of the state-of-the-art and future technology trends;
4. The Offeror's understanding of the scope of the problem and the technical effort needed to address it;
5. Intellectual property rights offered, and,
6. The Offeror's understanding of the project's risks, and how these risks have been identified and how they are being addressed, as well as how the proposed solution compares to similar work performed.

B. Mission Relevance. Extent to which the work proposed applies to one of DHS's operational security environments and the needs of S&T as stated in Research Opportunities of Strategic Interest in Part I, Paragraph 5, of this Announcement.

C. **The Offeror's capabilities, related experience, and past performance, including the qualifications, capabilities, and experience of the proposed principal investigator and personnel.**

1. The quality of technical personnel proposed; proposed key personnel
2. The Offeror's experience in relevant efforts with similar resources; and
3. The ability to manage the proposed effort.
4. Provide a list of similar contracts, delivery orders, purchase orders, and/or subcontracts (hereafter referred to as "contracts") completed during the past 3 years, a list of similar contracts currently in process, or a combination of both. Similar contracts listed may include any contract entered into with the Federal Government, agencies of state and local governments, and commercial customers. Offerors that are newly formed entities without prior similar contracts shall associate proposed personnel with similar current or completed contracts. Include the following information for each contract, if unclassified and disclosable:

   - Name of Contracting Activity
   - Contract Number
   - Contract Type
   - Total Contract Value
   - Description of Contract Work
   - Contracting Officer name and e-mail address
   - Contracting Officer's Technical Representative name and telephone number (if applicable)
   - Administrative Contracting Officer's name and telephone number (if different from the Contracting Officer listed above)
   - List of First-Tier Subcontractors

D. **Cost/Price, including cost realism and reasonableness analyses.** Each response will be reviewed for cost realism, reasonableness, and overall best value to the Government. Members of the evaluation team may presume that the Offeror's technical approach serves as a rationale for the labor mix and labor hours used.

E. **Extent of subcontracting commitment.** For proposed awards to be made as contracts to large businesses, the small business consideration section of each proposal will be evaluated based on the extent of Offeror's commitment in providing meaningful subcontracting opportunities for small businesses, small disadvantaged businesses, woman-owned small businesses, HUBZone small businesses, veteran-owned small businesses, service disabled veteran-owned small businesses, historically black colleges and universities, and minority institutions. All Offerors shall indicate their business size status (listed above) and list each subcontractor and its business size status.

The Federal Acquisition Regulation (FAR) requires that a large business Offeror be Encouraged to utilize small business opportunities. This satisfies the FAR requirement. While this is only applicable to large businesses, all Prime Offerors are required to identify its business size status listed above and list its subcontractors' business size status.

The final evaluation will be based on an assessment of the overall best value to the Government based on these Factors and elements. Awards will be made based on proposal evaluation, funding availability, and other programmatic considerations, including awards to lesser rated proposals where competing or alternate technologies are deemed to reduce technical risk or are otherwise more technically advantageous.

VI. AWARD ADMINISTRATION INFORMATION

1. Administrative Requirements –

- The North American Industry Classification System (NAICS) code – The North American Industry Classification System (NAICS) code for this announcement is 541712 with a small business size standard of 500 employees.

- CCR - Successful Offerors not already registered in the Central Contractor Registry (CCR) will be required to register in CCR prior to award of any grant, contract, cooperative agreement, or other transaction agreement. Information regarding CCR registration is available at .

- Certifications – In accordance with FAR 4.1201, prospective Offerors for contracts, and other transaction agreements involving prototypes, shall complete the Online Representations and Certifications Application (ORCA) at . Offerors shall make mention of its ORCA completion in its proposal, and provide its "Certification Validity" period. Successful Offerors will be provided additional information with regards to certification for grants, cooperative agreements, or other transaction agreements (other than for prototypes) proposals.

- Subcontracting Plans - Successful contract proposals that exceed $550,000, submitted by all but small business concerns, will be required to submit a Small Business Subcontracting Plan in accordance with FAR 52.219-9, prior to award.

- Federal Travel Regulations (FTR) – Information on per diem rates based on travel locations are provided on . Also, refer to FAR PART 31 for information regarding travel costs.

2. Reporting -

The following are samples of data deliverables that are typically required under a research effort:

- Technical and Financial Progress Reports
- Presentation Materials (Includes Pictures)
- Other Documents or Reports
- Report of Demonstration
- Monthly Program Report
- Final Technical Report

The following minimum deliverables will be required under traditional procurement contracts or other transactions agreements awarded to those Offerors whose Full Proposals are selected for award:

Monthly Program Report

Brief narrative reports must be electronically submitted to the Program Manager within one week after the last day of each month (not more than two pages). These reports must describe the previous calendar month's activity, technical progress achieved against goals, difficulties encountered, recovery plans (if needed), explicit plans for the next calendar month, and financial expenditures (including expenditures during the past calendar month period plus cumulative expenditures, and projected expenditures for the coming calendar month).

Final Technical Report

For a final report, each selected Offeror must provide a technical report of work performed during the period of performance, delivered no later than the last day of the period of performance. The final report must be a cumulative, stand-alone document that describes the work of the entire test and evaluation period leading up to it. It must detail how the design prototype was refined or otherwise prepared for the test and evaluation program and, if applicable, why such refinements or preparations were undertaken. It must include any technical data gathered, such as measurements taken, models developed, simulation results, and formulations developed. The final report must include a summary of all performance goals versus performance achieved during the program (either measured or otherwise substantiated). The final report must discuss all variances from the performance goals versus performance achieved, including reasons or theories for variances. If applicable, provide a discussion of how the Offeror might meet any unmet performance goals under a future effort. This final report must also include "lessons learned" from the effort, recommendations for future research, development, or testing that would lead to success in meeting the performance goals. The final report must provide a comprehensive and detailed account of all funds expended.

VII. OTHER INFORMATION

1. Government Property, Government Furnished Equipment (GFE) and Facilities

Each Offeror must provide a specific description of any equipment/hardware that it needs to acquire to perform the work. This description must indicate whether or not each particular piece of equipment/hardware will be included as part of a deliverable item under the resulting award. Also, this description must identify the component, nomenclature, and configuration of the equipment/hardware that it proposes to purchase for this effort. It is the Government's desires to have the contractors purchase the equipment/hardware for deliverable items under an award. The purchase on a direct reimbursement basis of special test equipment or other equipment that is not included in a deliverable item will be evaluated for allowability on a case-by-case basis. Maximum use of Government integration, test, and experiment facilities is encouraged in each of the Offeror's proposals.

Government research facilities may be available and must 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 project or program. The use of these facilities and resources will be negotiated as the program unfolds. Offerors shall explain which of these facilities they recommend and why.

Intellectual Property -- Offeror to discuss here with respect to the earlier guidance in this Announcement on Assertion of Data Rights.

2. 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. However, classified proposals are also encouraged and integrators and experiments may require classified work.

If developers use unclassified data in their deliveries and demonstrations regarding a potential classified project, they shall use methods and conventions consistent with those used in classified environments. Such conventions will permit the various subsystems and the final system to be more adaptable in accommodating classified data in the transition system.

If during the performance of the effort under an award, the Contractor may be required to have access to, and may be required to receive, generate or store information classified to the level of (SECRET or TOP SECRET). For personnel, a minimum of a (SECRET or TOP SECRET) clearance is required. Any Contractor facilities used in support of this contract must be granted (SECRET or TOP SECRET) facility clearances and have the capability to store material classified up to and including (SECRET or TOP SECRET). A DD Form 254 will be required prior to access or production of any classified information. Additionally, the Contractor is required to safeguard the information labeled as proprietary.

Any security concerns *must* be addressed to:

Christopher Feathersten
Director of Security
Science and Technology Directorate
Department of Homeland Security
Unclassified email: Christopher.featherston@dhs.gov
Classified email:

NOTE: Please send an unclassified alert email to Christopher.featherston@dhs.gov and LRBAA10-01@dhs.gov before emailing classified information to

Office: 202-254-6117
Fax: 202-254-5783

3. Project Meetings & Reviews

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 shall assume that 40% of these meetings will be at or near DHS S&T offices in Washington, DC and 60% at the Contractor's offices or other government facilities. Interim meetings are likely, but these will be accomplished via video telephone conferences, telephone conferences, or via web-based collaboration tools.

4. Questions

Any questions regarding this Announcement must be addressed to the LRBAA Contracting Officer via the contact methods outlined under "General Information" above.

5. Information for White Paper and Full Proposal Respondents

This LRBAA is for planning purposes only and must not be construed as an obligation on the part of the Government to acquire any products or services. No entitlement to payment of direct or indirect costs or charges by the government will arise as a result of submission of responses to this LRBAA and the government's use of such information. Respondents to this LRBAA may be requested to provide additional information based on their submittals. Unnecessarily elaborate responses containing extensive marketing materials are considered unresponsive to this LRBAA.

6. SAFETY Act

Congress enacted the Support Anti-terrorism by Fostering Effective Technologies Act of 2002 (the "SAFETY Act") as part of the Homeland Security Act of 2002. The SAFETY Act provides limitations on the potential liability of those firms that develop and provide qualified anti-terrorism technologies. DHS's Science and Technology Directorate, acting through its Office of SAFETY Act Implementation, encourage the development and deployment of anti-terrorism technologies by making available the SAFETY Act's system of "risk management" and "liability management." Offerors submitting proposals in response to this BAA are encouraged to submit SAFETY Act applications on their existing technologies and are invited to contact the Office of SAFETY Act Implementation (OSAI) for more information at 1-866-788-9318 or helpdesk@safetyact.gov or visit OSAI's website at www.safetyact.gov.

7. Pre-Submission Inquiries

Potential Offerors may submit informal initial inquiries/comments to the SMEs prior to submitting a formal White Paper. SMEs ***cannot*** assist a potential Offeror in the preparation of a White Paper nor propose any idea(s) they would like the potential Offeror(s) to address in a White Paper(s).

The SMEs can let potential Offerors know whether an idea appears to be within the scope of the Division's areas of interest and also the scope of the LRBAA.

Potential Offerors ***cannot*** be precluded from submitting a formal White Paper based upon an SME's response to a pre-submission inquiry.

Prior to preparing and submitting White Papers and Full Proposals, potential Offerors are strongly encouraged to contact the S&T Point of Contact (POC) whose Division best matches the Offeror's field of interest. Ideas may cross divisional boundaries so each division of interest shall be copied on the same correspondence/e-mail box, rather than submitting individual e-mails to each division.

In this e-mail, the Offeror shall briefly describe the technology, the research being conducted/needed to continue, and its proposed applications. Fully developed products are not normally considered as a solution under this effort unless the Offeror is proposing a totally different application for the product or a modification is needed and some research is required to determine if it will be successful. White Papers and Full Proposals shall not be sent to these addresses and are not considered as submissions to the Long Range BAA.
These boxes are monitored regularly, and someone will contact the Offeror(s) shortly about the information it has have provided. A Subject Matter Expert (SME) will respond as soon as possible to the pre-submission inquiry.

8. Point(s) of Contact – Emails forwarded to the contacts listed below shall indicate in the subject line: Long Range BAA. When submitting a White Paper resulting from Divisional conversations, please indicate specifically who you contacted within the Division(s) to ensure they are notified when an Offeror's White Paper arrives.

Science and Technology Points of Contact:

Homeland Security Advanced Research Projects Agency (HSARPA/Innovation)

Research

Transition

Explosives

Chemical/Biological

Borders and Maritime

Command, Control, and Interoperability

Human Factors

Infrastructure and Geophysical

PEO-IED

Each Point of Contact can be reached at the following address:
Department of Homeland Security
Science and Technology Directorate
Mail Stop 3150
Washington, DC 20528

The email addresses listed above are monitored by support personnel (contractors) within the divisions who will route the inquiry to the appropriate subject matter experts within each S&T Division. All support personnel have signed NDAs that apply to the Long Range BAA.

Appendix 1. S&T LONG RANGE BAA (LRBAA) FORM (White Paper)

DHS S&T LRBAA 10-01 White Paper Form Calendar Year 2010

Name of Project/S&T Division

Name(s) and Contact Information of Performers

Name:
Mailing Address:
Telephone:
Fax:
Email:

Name and Contact Information of Financial Contact

Name:
Mailing Address:
Telephone:
Fax:
Email:

Overall scientific and technical merits of the proposal /Mission Relevance (2000 words or less)

List of Tasks and Schedule (From Award Date)

Task 1: (Start to Month ___)
Task 2: (Month ___ to ___)
Task N: (Month ___ to ___)

Cost of Each Task/Total Project Cost

Breakdown of Costs by Tasks:

Task 1 Cost: $
Task 2 Cost: $
...
Task N Cost: $
Total Cost: $

Breakdown of Costs by Type:

Labor Costs: $
Materials & Supplies Costs: $
Capital Equipment Costs: $
Travel Costs: $
Indirect Costs: $
Total Cost: $

Description of Deliverable(s) and Schedule of Delivery

Deliverable 1: ___ (Award Date + ___ months)
Deliverable 2: ___ (Award Date + ___ months)
Deliverable N: ___ (Award Date + ___ months)

Major Milestone(s) for Task and Phase Completion as well as Follow-On Work (150 words or less)

Task Milestone(s): *[Criteria for completion of particular Task(s)]* (Award Date + ___ months)
Phase Milestone(s): *[Criteria for completion of particular Phase(s)]* (Award Date + ___ months)

Offeror's capabilities, related experience, and past performance, including the qualifications, capabilities, and experience of the proposed principal investigator and personnel (1000 words or less)

Subcontracting Commitment

COMMENTS

NOTE: Resumes are not requested with a White Paper Submission; qualifications must be included.