

First Responders Group BAA 13-012/ CALL 0004

1. **Announcement Number:** BAA 13-012/Call 0004
2. **FBO Solicitation Number:** HSHQDC-13-R-B0012
3. **Solicitation Open/Close Dates:**
 - Opening Date – 13 October 2015
 - Closing Date – **30 November 2015**

Proposals are due by 4:00 p.m. EST time on the closing date. There will be no exceptions to the time and date on which responses are due, unless determined otherwise by the Government. Proposals received after the closing date/time will not be considered.

4. **Solicitation Topics:** The following are the eight intended topics, subject to change, under each Technical Topic Area (TTA). Please refer to the attached Statement of Objectives (SOOs) for detailed information.
 - **Respiration Protection for Firefighters during Overhaul Operations (SOO A)**

Firefighters rely upon carbon monoxide (CO) detection as the signal for removing their mask. Air quality studies of toxin exposure during overhaul firefighting note that there are many other chemicals and potentially toxic gases present during the cold smoke environment which are inhaled, ingested, or absorbed through skin contact. The purpose of the proposed solution is to reduce the risk of respiratory exposure, including the absorption of harmful toxins (e.g., smoke, and combustion products, such as gases, vapors, or particulate matter) and carcinogens, during overhaul and fire-cause determination periods by firefighters and other emergency responders. The solution shall provide a safe and comfortable alternative to the current self-contained breathing apparatus (SCBA) worn during firefighting, in order to encourage longer wear, and thereby protect the firefighter from inhaling harmful toxins present in a cold smoke environment.
 - **Rapid Vehicle-Borne Improvised Explosive Device (VBIED) Assessment and Inspection (SOO B)**

Vehicle-Borne Improvised Explosive Devices (VBIEDs) are a significant threat that is difficult to defeat in certain conditions. There is a critical need to develop a tool that shall provide a rapid identification ability to mark or clear a suspicious vehicle or container as quickly as possible for the presence of VBIED components. The goal of this project is the development of much faster VBIED threat assessment solution that will provide the Explosive Ordnance Disposal (EOD) technician with the requisite information to select the best tool to render the situation safe. With a confidence level of 90% or more using non-intrusive techniques, this technology solution shall provide the requisite assurance to make actionable decisions to evacuate or render a potential threat safe.

- **Universal Operator Control Unit Platform (SOO C)**

The proposed solution shall develop a standardized Operator Control Unit (OCU) platform to reduce training requirements and associated costs. The solution will enable end users (i.e., bomb technicians) to operate multiple robotic platforms using a single, standardized control unit rather than allocating valuable time to learning multiple control units for different robotic platforms. This technology will lead to greater interoperability, lessen training requirements and reduce operating and maintenance (O&M) costs present today from maintaining multiple platforms devices.

The technology solution shall enable operators to have immediate control of robotic platforms deployed in the field without the need for additional training or preparation time. Additionally, because of the simplified operation, it would eliminate the need to transport multiple controllers, which take up precious space in response vehicles. A unified controller also reduces costs of new equipment by eliminating the need for purchasing separate controllers for each robotic platform, and reduces costs to repair by producing a more cost effective standardized system.

- **Activation of Body-Worn Cameras without Responder Manipulation (SOO D)**

The current change in the climate of emergency response is dictating that first responders wear body-worn cameras for both accountability and as documentary evidence. There are currently two types of body-worn cameras: cameras that constantly stay on, and cameras that require user activation. First responders require a technology that will activate body-worn cameras when needed without the wearer's manipulation to ensure all events are recorded to improve accurate documentation with minimum user interaction. The tool must operate under extreme weather conditions encountered by first responders during routine job performance or under emergency conditions.

- **Drone-Based Wireless 360° Camera (SOO E)**

The purpose of this motion-based, continual video camera is to provide a full panoramic 360 degree view for gathering real-time, multi-discipline situational awareness of an incident. This drone mounted camera will transmit real time video feed wirelessly back to the end user. By using the camera's "bird's eye" capability, first responders will increase their situational awareness of an incident and gain a better understanding of how to respond.

- **Enhanced Roadway Safety for First Responders (SOO F)**

The purpose of the technology solution is to reduce the risk of emergency responders from being struck by vehicles while operating on the roadway. The solution shall examine existing roadway safety operations, technology, and modifications, to include responder protective clothing, emergency warning lighting, vehicle conspicuity technology, warning signage, vehicle detection technology, etc. By further developing the efficiency of emergency warning lights, vehicles used by first responders will become more visible to motorists, resulting in fewer accidents and potential fatalities. This technology will also detect vehicles going off course which could potentially hit emergency responders or their vehicles, as well as other relevant roadway safety technology.

- **Humanized 2-Arm Large 3D Robot (SOO G)**

This technology solution will increase the safety and efficiency of Explosive Ordnance Disposal (EOD) technicians by reducing the need for humans to manually mitigate bomb threats. This new technology will emulate all the necessary hand movements of a human operator without placing them in a hazardous environment (i.e., operable from a safe standoff distance). It will provide greater attention to detail than all solutions currently available on the market and provide a much broader capability of response by utilizing new, reliable and safer tactics, techniques, and procedures previously unattainable with robotics. The addition of tactile force feedback will provide the operator the ability to determine the amount of applied force required when picking up or moving items with the end effectors.

- **Law Enforcement Capture and Restraining System (SOO H)**

Law enforcement personnel need a safe, easy to use, and effective restraining system. The proposed solution must safely and securely restrain a suspect in a way that prohibits them from harming themselves or others, while still allowing them the ability to walk, sit, and maintain enough physical capability to follow officer direction. The device shall allow officers to move an unconscious or combative suspect, and be operable (adjustable) for a wide range of body sizes and types. The solution must decrease the potential for mechanical failure in comparison to traditional handcuffs (e.g., lock breakage, double-lock failure, key risks, etc.), and be easily donned and doffed without requiring the suspect's cooperation (i.e., the device should be able to be applied by one officer without looking and ideally one-handedly).

5. **Number of Awards:** It is anticipated that one (1) award will be made for each topic area. However, multiple awards or no award may be made for each area depending on the quality of the proposals, individual funding requests, and total availability of funds.
6. **Anticipated Ceiling:** See BAA 13-012, Version 7, Section 3 – Award Information regarding anticipated ceiling.
7. **Award Type:** See BAA 13-012, Version 7, Section 3 – Award Information for information regarding award types.
8. **Anticipated Award Dates:** The 2nd Quarter of Fiscal Year 2016 is when the government anticipates making awards. However, the award date for each topic area may vary based on the quality of the proposals and the availability of funds.
9. **Proposal Instructions:** Offerors shall submit their proposals in accordance with BAA 13-012 Version 7, Section 5 – Application and Submission Information.
10. **Evaluation Criteria:** Proposals will be evaluated in accordance with the evaluation criteria contained in the BAA 13-012 Version 7, Section 6 – Evaluation Information.

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

12. Questions: Any questions concerning this call must be submitted via email to the Contract Specialist at Amalia.Rodezno@hq.dhs.gov and copy the Contracting Officer at sharon.flowers@hq.dhs.gov no later than **October 27, 2015 2:00 PM EST** in the following format:

Question #	Reference	Contractors' Question
1	General (if there is no specific document reference)	
2	(Example) BAA 13-012 V.6, page 15, Section 5.2, first paragraph, second sentence	
3	(Example) BAA 13-012/Call 0002, page 2, Section 9, first sentence	
4	(Example) SOO C, page 2, Section 5.1, second paragraph, second sentence	

Please include "Questions for FRG BAA Call 0004/SOO No. x" in the subject line. All questions and responses will be posted on the Federal Business Opportunities website <https://www.fbo.gov> or from <https://baa2.st.dhs.gov>. Questions will only be accepted or answered electronically.

13. Attachments:

SOO No.	SOO/TTA Title
A	Respiration Protection for Firefighters during Overhaul Operations
B	Rapid Vehicle-Borne Improvised Explosive Device (VBIED) Assessment and Inspection
C	Universal Operator Control Unit Platform
D	Activation of Body-Worn Cameras without Responder Manipulation
E	Drone-Based Wireless 360° Camera
F	Enhanced Roadway Safety for First Responders
G	Humanized 2-Arm Large 3D Robot
H	Law Enforcement Capture and Restraining System

14. Additional Information: In the event that any of the information contained in the SOOs conflict with BAA 13-012 Version 7 (for example, Government Furnished Equipment/Information/Property) the individual SOO shall take precedence.