

DHS SBIR-2016.1 Question and Answer Matrix

As of 1/13/2016

ID#	Topic Area	Question	Answer
1	General	We note that the invoicing instructions will be provided after contract award. Can you tell us at this time if you plan on using the WAWF system?	WAWF will not be used. Invoice instructions will be provided in Section G in any resultant contract.
2	General	Regarding the Cost Proposal - I am a new business and do not have any historical data to estimate indirect costs. Are there any recommendations on how I could address these costs? Also, it is my understanding that indirect costs are not as significant for "Firm Fixed Price" Contracts. The RFP states that: "A firm fixed price (FFP) contract will be awarded for all Phase I awards." Is the inclusion of the indirect costs and fringe benefits important for the cost proposal?	No recommendations will be given on how an offeror estimates the required cost elements. However, in accordance with FAR 15.403-4, certified cost and pricing data is not required for Phase I contracts.
3	General	Is it permissible to be part of two submissions for the same topic? For example, may a company submit a proposal as a prime, and be included as a subcontract on a separate proposal under the same topic?	Yes, it is permissible as long as there is no duplication of effort, and that the company has the resources to cover both efforts if selected. However if the efforts result in "essentially similar work" being proposed, it must be noted on the cover sheet of each proposal in accordance with solicitation instructions.
4	General	Is it permissible for one SBC to submit to more than one topic in this solicitation.	Yes.
5	General	Can a company leverage research funded by another federal agency related to a topic area included in this solicitation?	Yes. It is expected that the effort will benefit from any previous research experience in that area, regardless of its source. That said, if an Offeror elects to submit identical proposals or proposals containing a significant amount of essentially equivalent work in response to this Solicitation, or other Federal program solicitations, or is substantially the same as another proposal that has been funded, is now being funded, will be submitted to other agencies for funding consideration, or is pending with DHS or another Federal Agency, the Offeror must indicate so on the Proposal Cover Sheet and provide the following information in the Technical Proposal: a. Name and address of the Federal Agency(s) to which a proposal was submitted, will be submitted, or from which an award is expected or has been received. b. Date of proposal submission or date of award c. Title of proposal d. Name and title of principal investigator or project manager for each proposal submitted or award received e. Title, number, and date of solicitation(s) under which the proposal was submitted, will be submitted, or under which award is expected or has been received f. If award was received, state contract number g. Specify the applicable topics for each SBIR Proposal submitted or award received
6	General	Does it hurt our chances for award if our proposal does not include PhDs as key personnel?	No. While the evaluation of proposals includes past scientific and technical accomplishments of the team, a PhD is not required.

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7	General	Will Offerors have the opportunity to receive feedback prior to the award announcements for this solicitation?	Yes.
8	General	Will the Government provide specific contractual requirements for copyrights, patents, and data rights?	Yes. Resultant contracts will include all required clauses.
9	General	Can a principal investigator participate on a project as a subcontract?	No. The primary employment of the principal investigator must be with the small business concern at the time of the award and during contract performance.
10	General	The solicitation states, "Phase II awardees may receive up to one additional, sequential Phase II award to continue the work of an initial Phase II award." Please explain the mechanism whereby this would work; how it might apply.	The need for a subsequent Phase II effort is at the discretion of the DHS SBIR Program Office. Such a decision would be based on success of the initial Phase II, benefit to DHS of pursuing a subsequent effort, research priorities, and budget considerations.
11	H-SB016.1-002	In the Phase I topic description it states, " This phase demonstrate the various information security and privacy concepts and methods using a multi-user information-sharing prototype and provide detailed architecture and technical details." Does the term "prototype" mean a technical specification consistent with the description and some documentation that specifies how it would work or does it mean something else?	The prototype is to include a working demonstration of the concepts and methods as well as the detailed architecture and technical details.
12	H-SB016.1-003	For a proof of concept demo is it required to use a malware library?	If there is a demo, it must be convincing that the technique will be effective when applied to malware.
13	H-SB016.1-003	Can the demo be done using non-malicious software to valuate the techniques.	The demo must be convincing that it will work when applied to malware.
14	H-SB016.1-006	In the Title and Description of the Topic, the Solicitation refers to 'underserved EMS agencies'. Please provide a definition of the term 'underserved EMS agencies' in terms of metrics that meet the goals of the project (e.g. revenue, call volume, population density) and what elements that exist to place agencies in this descriptive category.	There is no formal definition of "underserved agencies" to provide. However, we do know that nearly 85% of firefighters and over 60% of EMS personnel work in mostly or all volunteer departments; and approximately 95% of those volunteers protect towns with populations of fewer than 25,000.
15	H-SB016.1-006	In Phase I description there is reference to 'high performing EMS and first responder systems.' Often 'high performance' systems adopt techniques, strategies and information systems based on needed efficiencies that are achieved by understanding and leveraging the demand patterns of relatively high call volumes. By definition, it appears that 'underserved EMS and first responder agencies' may be found in rural and other 'low demand' regions (see discussion in Phase I description). For purposes of our complete understanding, please provide examples, consistent with the vision and purpose of the topic, wherein 'underserved' agencies would have the requisite demand for services and resource allocation that would be impacted by the effective the application of 'high performance' system techniques.	There is no specific example to provide. A goal of this topic is to develop a solution irrespective of agency resource level.
16	H-SB016.1-006	Please clarify the intent of the topic with respect to identifying KPIs '...in varied geographic and rural versus urban settings.' Does this include, or can it be modified to include, urban, suburban, rural or other density designations found in existing national planning or industry standards?	Identifying KPIs is up to the Offeror and can include urban, suburban, rural, or other density designations found in existing national planning or industry standards.

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17	H-SB016.1-006	What is the definition of "Low-Cost," as it relates to this topic?	There is no formal definition of "low-cost" to provide. We do know that nearly 85% of firefighters and over 60% of EMS personnel work in mostly or all volunteer departments; and approximately 95% of those volunteers protect towns with populations of fewer than 25,000. A proposed solution can be low-cost or no-cost.
18	H-SB016.1-011	Will both indoor and outdoor training locations be required?	Yes
19	H-SB016.1-011	Would the training locations be static, or will the solution be expected to work at ad hoc locations? If the latter, how much set up time would be allowed prior to the training?	The training location should be relocatable. The technical approach should outline the anticipated set up time to support the virtual source capability with a preference for easy-to-use, fast set up times.
20	H-SB016.1-011	In addition to hardware used for indicating position, is using a hardware beacon to represent the virtual source(s) acceptable to improve measurement precision? Or must the sources be entirely virtual?	The use of a hardware beacon to represent virtual sources is acceptable. The sources need not be entirely virtual.
21	H-SB016.1-011	Would a solution requiring an affordable (e.g., less than \$100) piece of hardware in addition to a smart phone / smart device and a set of positioning beacons be acceptable	Yes.
22	H-SB016.1-011	Will results of DNDO studies on existing RIID/SPRD instrument User Interface's (UI) be made available in support of the UI design effort?	SME support will be available to support the UI design effort at select milestone reviews. End-user feedback will be available following select deliverable receipt by DNDO. However, DNDO will not provide any information on other Vendors' User Interface designs if that information is considered proprietary.
23	H-SB016.1-011	Would it be beneficial to be able to demonstrate the use of—and training for—the developed UI within a virtual, computer-based training environment that accurately simulates radiation and time/distance/shielding effects? Could this be used in lieu of a "real-world" virtual source system in the near-term, or perhaps indefinitely?	It would be beneficial to demonstrate the use and training for the developed UI within virtual, computer-based training environments if practical. The computer-based training environment is not sufficient for replacement of desired capability to enable movement by end-users and then have the detector output change/adjust to the virtual source.
24	H-SB016.1-011	It is stated in the topic that "Source location, isotopic signature, intensity, and occluding background environment can be programmed for training purposes". Would it be expected that the isotopic signature would be affected by source masking or background? Also would displaying spectra (with degradation) be desirable?	The ability to modify the source signature and emission for various masking and background scenarios is a desired capability for the scenario planning mode. It would be desirable to display the spectral degradation if that feature were available on the training mode. Source configuration of virtual features should not be available on the training mode as they are not part of the current COTS interface capabilities.
25	H-SB016.1-011	Is a display for detection of a real source required for Phase I	No.
26	H-SB016.1-011	Are estimates of predicted performance expected in Phase I proposals?	The proposal should identify key features as well as their estimated performance.
27	H-SB016.1-011	Is a discussion of baseline metrics expected in Phase I proposals	Yes.
28	H-SB016.1-011	Will DHS provide access to subject matter experts (SMEs) on operational use of fielded instruments? If not, is there a recommended source?	DNDO will provide access to Subject Matter Experts at project kickoff and during milestone reviews.

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29	H-SB016.1-011	What actual detectors are in use with DHS-affiliated responders now?	<p>While the technology is desired to be potentially scalable to a larger number of detection systems, the following is currently included in the DNDO MDDU systems:</p> <ul style="list-style-type: none"> o PRD – D-TEC Systems (Mini Rad-D) o ID PRD - Thermo Scientific (Interceptor)(Is in the process of getting phased out, RAD EYE PRDs will take their place) o Backpack - Thermo Scientific (PackEYE) Sensor Technology (Radpack)(Only on trailer 1 and is in the process of getting phased out) o RIID - FLIR (IdentiFINDER 1 & II) o Advanced RIID – ORTEC (Detective) o Mobile System – Radiation Solutions (RSI-700)
30	H-SB016.1-011	Please further define ‘Prototype User Interface’. Is DHS looking for well tested mockups or a fully functioning software deliverable?	<p>The objective is to have a functional software application. For Phase I, a sufficiently-tested mockup of the software approach would be a threshold for continuation to Phase II.</p>
31	H-SB016.1-011	What are the current specifications of the existing hardware (size, sku, etc)?	<p>The specifications of the existing hardware are available upon request and as necessary after selection and award.</p>
32	H-SB016.1-011	Can you provide a list of the types of detection devices to be used for simulations.	<p>The list of detection systems currently included in the DNDO MDDU systems is:</p> <ul style="list-style-type: none"> o PRD – D-TEC Systems (Mini Rad-D) o ID PRD - Thermo Scientific (Interceptor)(Is in the process of getting phased out, RAD EYE PRDs will take their place) o Backpack - Thermo Scientific (PackEYE) Sensor Technology (Radpack)(Only on trailer 1 and is in the process of getting phased out) o RIID - FLIR (IdentiFINDER 1 & II) o Advanced RIID – ORTEC (Detective) o Mobile System – Radiation Solutions (RSI-700)
33	H-SB016.1-011	How many isotopic signatures will the system need to identify? Which isotopic signatures will the system need to identify?	<p>The list of isotopic signatures that the system will need identify depends on the detection system. Many of the systems have configurable lists of isotopes. The desired functionality is to be able to replicate the features within the existing interface to include number of isotopes and isotopic signatures.</p>
34	H-SB016.1-011	Is there a specific operating system or platform that is preferred?	<p>There are no restrictions on the operating system or platform other than being COTS. Approaches scalable to multiple operating systems and platforms are greatly encouraged.</p>
35	H-SB016.1-011	Is there a possibility of the system being used on small (less than 4”) screens?	<p>There are no identified requirements provided for screen size other than the ability to sufficiently replicate COTS system functionality.</p>
36	H-SB016.1-011	Will hardware devices be connected to external network or will they communicate directly?	<p>Connectivity equivalent to those available on smartphones are desired. This includes the ability for proposed technology to connect to external networks</p>

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37	H-SB016.1-011	Will DHS provide 'end-users' to test the interfaces on and collect feedback? If not, is there a recommended source?	End-user feedback will be provided by DHS following selected deliverables. Additional end-users outside of those provided by DHS are encouraged
38	H-SB016.1-011	Will "localization" be purely directional or will multiple devices need to cooperate to locate the source to a point?	The desired localization approach should include existing localization capabilities of units. If the current approach to localization includes being direction or using body-shielding, that functionality should be included in the proposed approach. If the existing systems use multiple devices to cooperate, then that capability is desired. Fusion of multiple units is currently not an approach used by MDDU detection systems listed above.
39	H-SB016.1-011	The third bullet of the description mentions that the display may be able to be injected directly into the hardware. What does that mean?	It means that a third party could inject additional data into a commercial detector system and the subsequent combined data would then be displayed using the commercial detector system.
40	H-SB016.1-011	In bullets four and six of the description, there is mention of a "virtual source", and the ability to "program" its location. Bullet four implies a real, physical device, which can be placed in a specific location, while bullet six indicates that it only exists as a construct within the software of the smartphone. Is this virtual source envisioned to be a real, physical, device of some sort, or is it only something that exists as an entity in the software of the smartphone?	It is not only something that exists as an entity in the software of the smartphone based on current smartphone capabilities. A virtual source that utilizes a real, physical device would be acceptable as well as other approaches that may achieve the desired capabilities.
41	H-SB016.1-011	Upon re-reading, it appears that the virtual source is intended as a construct within the software, and bullet four only makes reference to being able to track the position of the smartphone/trainee in order to simulate moving closer to or farther from this source. Is this the case?	Yes.
42	H-SB016.1-011	At the bottom of the description of Phase I, there is mention of predicted performance, and the establishment of baseline metrics. Since this is a display device, the only real performance parameters are the data rate into the smartphone (which is dependent on the communication method used - Bluetooth, USB, Wi-Fi, etc.), and the display update speed - the speed to draw the data and other information onto the screen. For Phase I, this will basically be a simulator, so its apparent virtual source discovery, analysis, and identification performance can be whatever we want it to be. What performance parameters and metrics are expected?	The predicted performance will be based on the proposed solution within the technical approach. The predicted performance will also be based on its use as a training tool.
43	H-SB016.1-011	Will DNDO provide support in organizing end-user focus groups to generate feedback during interface design?	DNDO will provide some end user engagement as applicable to the various phases of development. In the case where the end user engagement does not meet the needs of the developer, then a developer may augment that engagement to achieve successful development.
44	H-SB016.1-011	How much instrumentation and calibration is acceptable to set up the virtual test environment in a new area? Would it be preferable to have system be very easy to set up in a new area or to improve its accuracy?	DNDO is looking principally for approaches that provide flexible use and lowered operational burden to include set up time and setup complexity. DNDO is not providing restrictions on instruments and their calibrations; however, DNDO is looking for realistic representations of actual source encounters.

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45	H-SB016.1-011	Will there be any constraints on the virtual search areas to be instrumented? Will they be mostly inside or outside, cluttered or open?	DNDO is looking principally for approaches that provide flexible use and lowered operational burden to include set up time and setup complexity. DNDO is not providing restrictions on instruments and their calibrations; however, DNDO is looking for realistic representations of actual source encounters.
46	H-SB016.1-011	Is it okay to use commercially available parts to perform the Phase I solicitation along with collaboration from original equipment manufacturer (OEM)?	Yes.
47	H-SB016.1-011	If research, development, experimentation, present available technology, and techniques results in a beneficial discovery, how would this be handled?	If one of the performance achieves or exceeds expectations, then performance on that criteria would be handled favorably. Additionally, the SBIR Rights in the Data clause will govern data first created in the performance of this contract.
48	H-SB016.1-012	Is \$5/cm ³ cost of scintillator material (including encapsulation) used in the detector?	It depends on how encapsulation is defined. This is the cost of the basic, free-standing, composite material mixture in its final form. If some method of encapsulation is needed to hold and or protect it, then that cost has to be included. If encapsulation is added for additional benefits (such as improved light extraction), then that would not be included in the \$5/cm ³ cost.
49	H-SB016.1-012	Could you comment on the production quantity to reach that price goal?	Quantity depends on size. Quantity is what would be projected to be market demand after sufficient exposure to and acceptance by the rad/nuc community.
50	H-SB016.1-012	Should the detector be sensitive to thermal or fast neutrons or both?	Both, if possible, but not necessarily.
51	H-SB016.1-012	Could you comment on the minimum detection efficiency for both gammas and neutrons?	The target is 100% intrinsic efficiency, but depends on cost/performance ratio.
52	H-SB016.1-013	Looking at the specification there is a requirement for the LINAC to stay <50 lbs including supporting electronics. Do the supporting electronics include the RF source (magnetron or klystron)? The supporting electronics (excluding the RF source) for a linear accelerator are hundreds of pounds and the lead shielding can be hundreds of pounds as well. Based on this , I want to make sure the 50 lb. (max) requirement isn't some kind of typo and that it is the max allowable weight for the linear accelerator only. Also, the dose rate is highly dependent on the duty factor, which is not specified. Can the duty be whatever is needed to achieve the specification?	For the first set of questions regarding the weight limit of <50 lbs, this includes the RF source but does not include shielding. For future work, transformational ideas into reducing the weight of supporting electronics and shielding for accelerators could be of interest. Regarding the duty factor, it should be whatever is required to meet the dose as specified in the topic area.