

FutureTECH: Concept of Operations



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FutureTECH Program

Scope:

We have developed a new program to enable DHS S&T to efficiently and cost-effectively leverage the resources, skills, experience and productivity of the private sector and other non-DHS entities to develop technologies/capabilities in alignment with research/innovation focus areas obtained from DHS S&T. These technologies/capabilities can ultimately be used by DHS, the first responder community, critical infrastructure/key resources (CI/KR) owners/operators and other DHS stakeholders. In essence, FutureTECH provides a "window of visibility" or "preview" of research/innovation focus areas that DHS and its stakeholders believe are essential in future products and services where detailed operational requirements documents (ORDs) can not be fully developed at this time. The program also provides insight into areas where Independent Research and Development (IRAD) monies could be spent by firms possessing funding to address DHS research/innovation focus areas.

Analogous to the popular SECURE Program, FutureTECH is another innovative private-public partnership and outreach program that outlines focus areas for which current technology only exists at earlier stages on the technology readiness scale (TRL 1-6). Technologies developed in alignment to stated focus areas could lead to cost-effective and efficient product development (TRL 7-9) when detailed requirements contained in ORDs are available. Like the SECURE Program, DHS will provide information to the public in an open and free way. The private sector and other non-DHS entities may use their own resources (including IRAD) to develop technologies/capabilities that will be of potential benefit to the DHS mission. Like the SECURE Program, DHS may enter into a simple CRADA (Cooperative Research and Development Agreement) with an organization that shows it has the ability to deliver technology aligned with the research/innovation focus area sought after by DHS.

To state it simply, the SECURE Program focuses on product/service development to create products and services to protect our nation in the shorter term, while FutureTECH will focus on critical research/innovation focus areas at lower TRLs for eventual deployment. Like all of the Commercialization Office's programs, all parties "win" in the FutureTECH Program--the private sector and others by receiving valuable insight into future research/innovation focus areas needed by DHS and its stakeholders. DHS "wins" because it will leverage the valuable skills, experience and resources of the private sector and other non-DHS entities to expedite efficient and cost-effective technology development; the non-DHS entities "win" because they receive valuable information useful for their own strategic plans; and most importantly, all American taxpayers "win" because this innovative partnership yields valuable technologies/capabilities aligned with research/innovation focus areas developed in a more cost-effective and efficient way saving taxpayer money.

Overall Process:

Figure 1 is a graphical representation of the overall outreach process the Commercialization Office continues to implement to stimulate and engage the private sector and other non-DHS entities to use their resources to rapidly develop technology

aligned with research/innovation focus areas that can yield significant benefits for DHS S&T with a speed-of-execution not typically observed in the public sector.

Outreach to the Private Sector

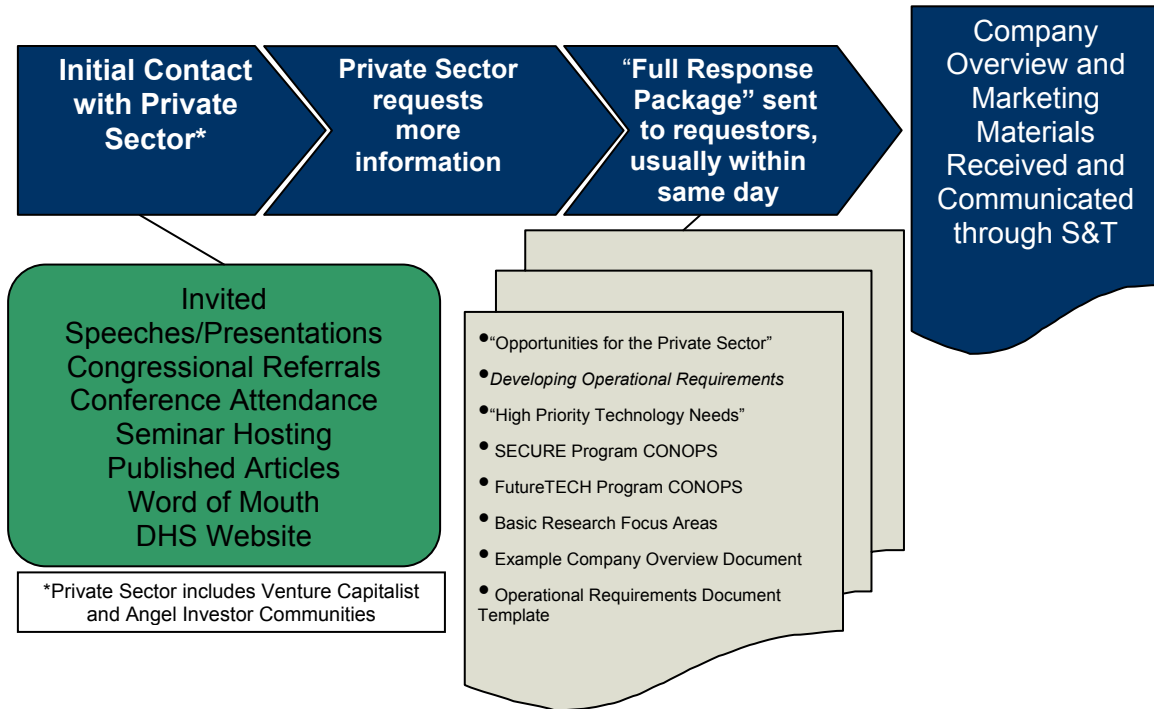


Figure 1: Overview of S&T Directorate Private Sector Outreach Process



Program Process:

DHS S&T will provide this FutureTECH vehicle by which the private sector and other non-DHS entities can identify or develop technology aligned with research/innovation focus areas ranging from TRL-1 through TRL-6 (not fully developed TRL-9 products and/or services) based on DHS S&T's insight and knowledge mainly through its Research and Innovation portfolios/areas.

This approach enables DHS S&T to collaborate on the development of technology aligned with several research/innovation focus areas in an open and free way. The private sector and other non-DHS entities receive information on what new technologies will be required over-the-horizon to protect our nation, removing much of the "guess work" normally associated with predicting future needs.

As with the popular SECURE Program, DHS will review third party, recognized test and evaluation data to ensure that all milestones/objectives of an executed CRADA agreement are met and DHS will place a given research/innovation focus area solution developed by an entity on the FutureTECH website demonstrating that the

research/innovation focus area has met DHS's broadly defined requirements (in contrast to the SECURE Program where products or services must demonstrate compliance to detailed operational requirements contained in an ORD).



Expression of Interest:

In the adherence to fairness of opportunity, and in order to capitalize on the free-market system, DHS S&T intends to publish this program and all ancillary requirements documents/information on the DHS website. These materials will be accessible by ALL. Given this information, the private sector and other non-DHS entities may contact DHS S&T if they are interested in developing or enhancing their technology within a research/innovation focus area in cooperation with DHS S&T. Potential research/innovation focus areas for this program (along with a simple CRADA agreement used in the SECURE Program) are provided on our website. The private sector organization or non-DHS entity must provide DHS S&T with basic, non-proprietary business information, contact information and demonstrate their potential alignment to widely available DHS S&T research/innovation requirements that are more detailed than what are commonly referred to as technology need statements, yet not as detailed as a well-defined ORD.



Acceptance:

In order to be fully considered by DHS S&T for cooperative research/innovation focus area technology development:

- An entity must demonstrate they either possess technology at TRL-1 or higher (i.e. basic research) or possess the ability to develop a technology aligned with the research/innovation focus area to TRL-6 for later technology insertion into a potential acquisition or commercialization program.
- The private sector and other non-DHS entities must propose a research/innovation focus area technology development effort that has clear and substantial alignment with any published DHS S&T requirements delineated above.

A DHS committee will be established to review the private sector and/or non-DHS entities' potential alignment to DHS research/innovation focus areas, and monitor the mutually-agreed-upon roles and responsibilities of partnership participants. The committee will consider these and other DHS proprietary metrics for determining which opportunities to pursue.



CRADA:

The private sector and/or non-DHS entity and DHS S&T could execute a simple, straightforward and binding CRADA whereby the non-DHS entity details milestones with dates and, in most cases, agrees to bear full and total financial responsibility to develop its technology aligned within the research/innovation focus area to a TRL-6 state. Under the Stevenson-Wydler Act (which is the statutory authority enabling DHS to enter into CRADAs), agencies may not contribute funds under a CRADA; however, they may contribute know-how, expertise, materials and equipment. It is important to mention that the execution of a CRADA agreement is at the sole discretion of the corresponding DHS S&T program manager. Additionally, a CRADA with DHS S&T will not necessarily lead to any follow-on contract actions or solicitations by DHS or other government agencies. Any solicitations for funding agreements related to technology areas collaborated upon in a CRADA would be subject to full and open competition. DHS S&T will publish on the DHS S&T website the factual finding(s) of any final assessment. DHS S&T has the right to cancel an agreement if the non-DHS entity does not fulfill/achieve its milestones or performance objectives by the mutually-agreed-upon dates.



Publication of Results:

It is apparent that the private sector and other non-DHS entities highly value DHS S&T's potential assessment of a given technology's recognized third-party test and evaluation (T&E) data. DHS-S&T will openly publish summary findings and an acknowledgement of an entity's attainment of performance objectives on the DHS public web portal for review by the DHS operating components, first responder communities, CI/KR owners/operators and other potential users.