



DHS Global Outreach Efforts: Looking for the Best Technology and Products -- Period.

DHS to leverage international partnerships to find the best technologies and products from around the globe for Homeland Security applications.

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November 2008



**Homeland
Security**

Science and Technology

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The recent establishment of the Commercialization Office at the U.S. Department of Homeland Security (DHS) Directorate of Science and Technology (S&T) has already made a significant impact to ensure that the Department and its members understand the value of commercialization to satisfying the needs of the Department. Commercialization efforts have shown the benefits that the private sector can bring in the efforts to work in a partnership with the Department to leverage the private sector's skills, experience, resources and interest in creating widely distributed products to achieve the goal of developing and deploying high performance products, systems and services critical to the objectives of DHS's seven operating components (TSA, FEMA, Coast Guard, Secret Service, ICE, CBP and USCIS) and first responders. Furthermore, the Department has made a concerted effort to reach out globally to become aware of, assess and work with technologies and products from around the globe because we understand that no one region has complete dominance in technology and product development. In so many ways, science, technology and product development transcend politics and geography. To this end, we have a keen interest in learning about all novel technologies and solutions that are available to meet our requirements.

The Department has recently undertaken the critical step of "socializing" a "commercialization mindset" throughout DHS and the first responder communities. Why is there a need for a commercialization process? DHS requirements, in most instances, are characterized by the need for widely distributed COTS (Commercial-Off-The-Shelf) products. Oftentimes, there is a need for thousands, if not millions, of products for DHS's seven operating components and the fragmented, yet substantial first responder market. Figure 1 shows the major differences between a "pure" Acquisition versus "pure" commercialization processes, along with the recently developed and implemented DHS "hybrid" commercialization process.

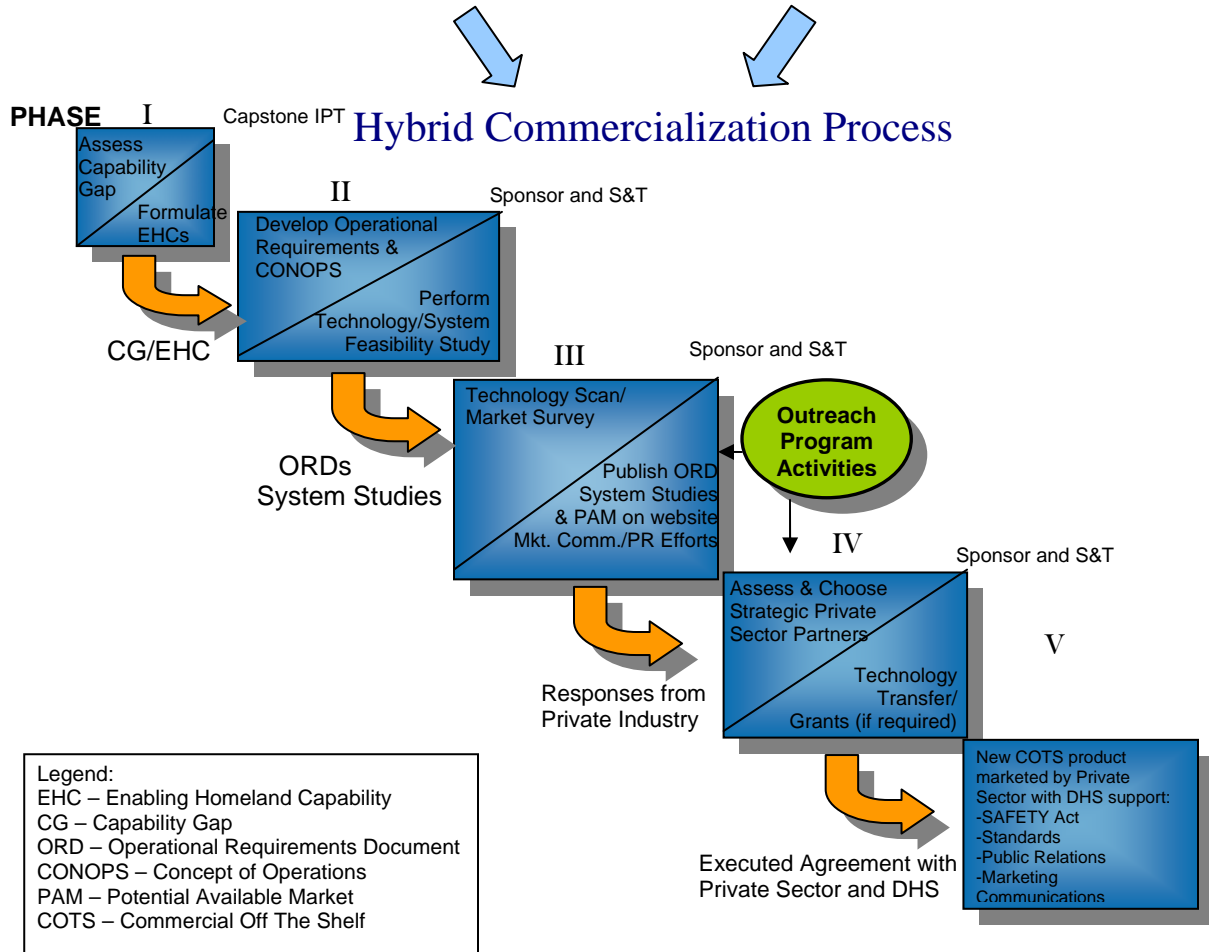
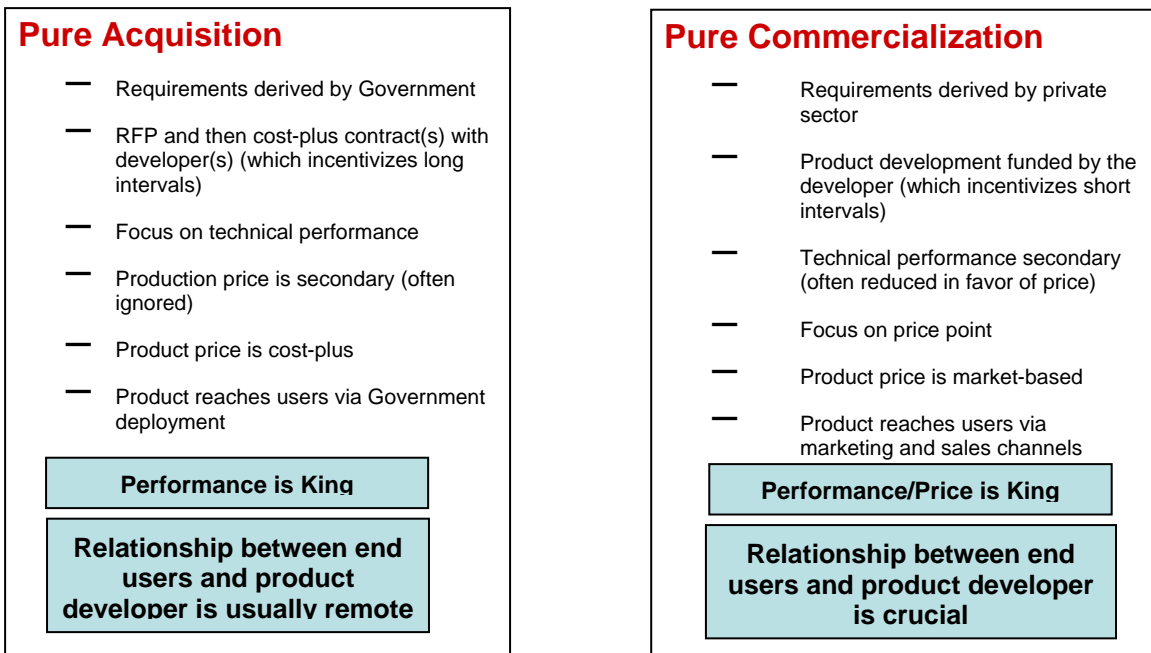


Figure 1: Comparison of “Pure Acquisition” versus “Pure Commercialization” models for product/system development and the resultant hybrid model implemented by DHS.

Figure 2 delineates the overall description of DHS’s new commercialization model and its first private sector outreach program called the SECURE (System Efficacy through Commercialization, Utilization, Relevance and Evaluation) Program. The goal of these efforts is to engage private sector companies, from any country, to develop products and services in a private-public “win-win” partnership and described in detail at www.dhs.gov/xres/programs/gc_1211996620526.shtm. Briefly, the SECURE Program is based on the premise that the private sector has shown that it is willing and able to use its own money, resources, expertise and experience to develop and produce fully developed products and services for DHS if significant market potential exists. The private sector has shown remarkable interest in devoting its time and money to such activities if and when an attractive business case can be made related to large revenue/profit opportunities, which certainly exist at DHS and its ancillary markets. The private sector requires two things from DHS: 1. detailed operational requirements and 2. a conservative estimate of the potential available market(s). This critical information can then be used to generate a business case for possible private sector participation in the program.

A New Model for Commercialization...

- Develop Operational Requirements Documents (ORDs)
- Assess addressable market(s)
- Publish ORD and market assessment on public DHS web portal, solicit interest from potential partners in a way that is open to small, medium and large businesses
- Execute no-cost (CRADA) agreement with multiple private sector entities and transfer technology and/or IP(if necessary)
- Develop supporting grants and standards as necessary
- Assess T&E findings after product is developed to assure DHS and ancillary markets that product meet its published specifications
- New Commercial-Off-The-Shelf (COTS) product marketed by private sector with DHS support

SECURE Program



- Application – Seeking products/technologies aligned with posted DHS requirements
- Selection – Products/Technologies TRL-5 or above, scored with internal DHS metrics
- Agreement – Abbreviated CRADA document that outlines milestones and exit criteria
- Publication of Results – Recognized third-party T&E conducted on TRL-9 product/service. Results verified by DHS, posted on DHS web-portal to provide confidence to potential customers at DHS and its ancillary markets that product(s) meet or exceed their published specifications in reference to their actual performance.

Figure 2: Step-by-step guide to the commercialization process developed and adopted by DHS with a brief summary of the popular SECURE Program.

To augment the commercialization process, DHS has undertaken the task of developing an easy-to-use comprehensive guide to assist in developing operational requirements. This guide now enables DHS personnel to articulate, in detail, a given system’s requirements and communicate those needs to both internal and external audiences. This effort addresses a long standing need for DHS to fully articulate its requirements. A copy of this guide, entitled “Developing Operational Requirements,” has been made publicly available at the previously mentioned website.

Early responses from groups within DHS and in the private sector related to this guide and programs like SECURE have been very favorable¹. The Department plans to regularly update its website with Operational Requirements Documents (ORDs) to continually expand this innovative private-public partnership. In addition, as evidenced in Figure 3, the taxpayers, private sector and public sector view programs like this as “win-win-win.”

| Benefit Analysis – “Win-Win-Win” | | |
|--|---|---|
| Taxpayers | Public Sector | Private Sector |
| 1. Citizens are better protected by DHS personnel using mission critical products | 1. Improved understanding and communication of needs | 1. Save significant time and money on market and business development activities |
| 2. Tax savings realized through private sector investment in DHS | 2. Cost-effective and rapid product development process saves resources | 2. Firms can genuinely contribute to the security of the Nation |
| 3. Positive economic growth for American economy | 3. Monies can be allocated to perform greater number of essential tasks | 3. Successful products share in the “imprimatur of DHS”; providing assurance that products really work. |
| 4. Possible product “spin-offs” can aid other commercial markets | 4. End users receive products aligned to specific needs | 4. Significant business opportunities with sizeable DHS and DHS ancillary markets |
| 5. Customers ultimately benefit from COTS produced within the Free Market System – more cost effective and efficient product development | 5. End users can make informed purchasing decisions with tight budgets | 5. Commercialization opportunities for small, medium and large business |

Figure 3: The SECURE Program is viewed positively by DHS stakeholders. The success of the program lies in the fact that all participants receive significant benefits.

It should also be mentioned that we are often asked about the “Buy American Act” and how that could be an issue for a non-American based firm. Simply stated, the Buy American Act is intended to provide a preference for supplies and construction materials that are of domestic (U.S.) origin. The Act does not affect the provision of services. Generally, when the Act applies, the preference takes the form of a pricing advantage in evaluation of offers. Because the negotiation of various treaties and trade agreements, however, supplies, services, and construction of non-domestic origin may be treated as though they are of domestic (U.S.) origin.

Some examples are: (a) For nations who are participants in the World Trade Organization Government Procurement Agreement, U.S. domestic treatment will be given to supplies and services valued at \$193,000 or more and construction valued at \$7.407 million or more; and (b) For NAFTA signatories, supplies of Canadian origin valued at \$25,000 or more and supplies of Mexican origin and services of Canadian and Mexican origin valued at \$64,786 or more, and construction of both nations valued at \$8.422 million or more receive domestic (U.S.) treatment.

In addition, the U.S. has negotiated other Free Trade Agreements (for example, with Australia, Singapore, Chile, and certain Caribbean nations) and a separate agreement with Israel that may use these or other values. The message is that, depending upon the value of the procurement, goods of non-domestic (U.S.) origin may well receive domestic treatment and not be subject to the Buy American Act preference. As you can see, the concept is simple, but the participating nations and dollar values differ. For your specific situation, it is suggested that you consult Part 25 of the Federal Acquisition Regulation, which is at Title 48 of the U.S. Code of Federal Regulations.

As one can observe, there are a plethora of opportunities for global businesses with DHS available to those who possess unique technologies and products. For more information please visit and read the background materials on the SECURE Program at the program’s website: http://www.dhs.gov/xres/programs/gc_1211996620526.shtm



Thomas A. Cellucci, Ph.D., MBA is the U.S. Department of Homeland Security’s first Chief Commercialization Officer. In his role, he recently published two comprehensive guides: *Requirements Development Guide* and *Developing Operational Requirements* to aid in effective requirements development and communication for the department. He possesses extensive experience as a senior executive and Board Member in high-technology firms in the private sector.

¹ See Cellucci, T. “Opportunities for the Private Sector,” 2008, 43pp. [Available online: http://www.dhs.gov/xres/programs/gc_1211996620526.shtm].

² Margetta, R. “S&T Official Working to Move Product Development Out of DHS, Into Private Sector,” Congressional Quarterly Homeland Security. June 27, 2008.

Doing Business with DHS S&T:

All U.S. Government business opportunities can be found at www.fedbizopps.gov.

- **HSARPA:** Register to join the HSARPA mailing list to receive various meeting and solicitation announcements. Link to the Long Range Broad Agency Announcement solicitation, where multiple awards are anticipated and will be based upon the proposal evaluation, funds availability, and other programmatic considerations. Also link to Representative High Priority Technology Areas, where DHS areas of interest can be found. <http://www.hsarpabaa.com>
- **Small Business Innovation Research(SBIR):** SBIR's goal is to increase the participation of innovative and creative small businesses in Federal Research/Research and Development (R/R&D) programs and challenge industry to bring innovative homeland security solutions to reality. <http://www.sbir.dhs.gov>
- **SAFETY Act:** The SAFETY Act enables the development and deployment of qualified anti-terrorism technologies and provides important legal liability protections for manufacturers and sellers of effective technologies. <https://www.safetyact.gov/>
- **TechSolutions:** The mission of TechSolutions is to rapidly address technology gaps identified by Federal, State, Local, and Tribal first responders by fielding prototypical solutions within 12 months at a cost less than \$1M per project. www.dhs.gov/techsolutions
- **Commercialization:** The mission of S&T's commercialization efforts is to identify, evaluate, and commercialize technologies that meet the specific operational requirements of DHS operating components and first responder communities. The commercialization efforts actively reach out to the private sector to establish mutually beneficial working relationships to facilitate cost-effective and efficient product development efforts. Please contact Chief Commercialization Officer Tom Cellucci at S&T-Commercialization@dhs.gov.



*From Science and Technology...
Security and Trust*

