Opportunities for the Private Sector

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Discussion Guide

- Overview of Department of Homeland Security
- Commercialization Office Initiatives at DHS
- Capstone Integrated Product Teams (IPTs)
- Market Potential is Catalyst for Rapid New Product Development
- Getting on the Same Page
- SECURE Program
- Safety Act Protection
- TechSolutions
- SBIR Opportunities
- Getting Involved
- Effecting Change in Government
- Summary
Homeland Security Mission

• Lead Unified National Effort to Secure America
• Prevent Terrorist Attacks Within the U.S.
• Respond to Threats and Hazards to the Nation
• Ensure Safe and Secure Borders
• Welcome Lawful Immigrants and Visitors
• Promote Free Flow of Commerce
S&T Goals

Consistent with the Homeland Security Act of 2002

- Accelerate the delivery of enhanced technological capabilities to meet the requirements and fill capability gaps to support DHS agencies in accomplishing their mission.

- Establish a lean and agile world-class S&T management team to deliver the technological advantage necessary to ensure DHS Agency mission success and prevent technological surprise.

- Provide leadership, research and educational opportunities and resources to develop the necessary intellectual basis to enable a national S&T workforce to secure the homeland.
# DHS S&T Investment Portfolio
**Balance of Risk, Cost, Impact, and Time to Delivery**

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<thead>
<tr>
<th>Product Transition (0-3 yrs)</th>
<th>Innovative Capabilities (1-5 yrs)</th>
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<tbody>
<tr>
<td>• Focused on delivering near-term products/enhancements to acquisition</td>
<td>• High-risk/High payoff</td>
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<td>• Customer IPT controlled</td>
<td>• “Game changer/Leap ahead”</td>
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<td>• Cost, schedule, capability metrics</td>
<td>• Prototype, Test and Deploy</td>
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<td>• HSARPA</td>
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<th>Basic Research (&gt;8 yrs)</th>
<th>Other (0-8+ yrs)</th>
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<td>• Enables future paradigm changes</td>
<td>• Test &amp; Evaluation and Standards</td>
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<td>• University fundamental research</td>
<td>• Laboratory Operations &amp; Construction</td>
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<td>• Gov’t lab discovery and invention</td>
<td>• Required by Administration (HSPDs)</td>
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<td>• Congressional direction/law</td>
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**Customer Focused, Output Oriented**
Three Step Approach: Keep it Simple and Make it Easy

1. Develop Detailed Requirements And Relay Conservative Market Potential

2. Establish Strategic Partnerships
   - Business Case Information
   - Open Competition
   - Detailed Mutual Responsibilities

3. Deliver Products!
# Two Models for Product Realization

### Big-A Acquisition
1. Requirements derived by Government
2. RFP and then cost-plus contract(s) with developer(s) (which incentivizes long intervals)
3. Focus on technical performance
4. Production price is secondary (often ignored)
5. Product price is cost-plus
6. Product reaches users via Government deployment

**Performance is King**

**Relationship between end users and product developer is usually remote**

### Pure Commercialization
1. Requirements derived by Private Sector
2. Product development funded by the developer (which incentivizes short intervals)
3. Technical performance secondary (often reduced in favor of price)
4. Focus on price point
5. Product price is market-based
6. Product reaches users via marketing and sales channels

**Performance/Price is King**

**Relationship between end users and product developer is crucial**

Is there a “Middle Ground”?

Source: Senior Executive Brief to Secretary Chertoff, Deputy Secretary Schneider and Leaders of G-7
A new model for Commercialization…

1. Development of Operational Requirements Document (ORD)
2. Assess addressable market(s)
3. Publish ORD and market assessment on public DHS web portal, soliciting interest from potential partners
4. Execute no-cost agreement (CRADA-like) with multiple Private Sector entities, transferring technology (if necessary)
5. Develop supporting grants and standards as necessary
6. Assess T&E after product is developed
7. New Commercial off the Shelf (COTS) product marketed by Private Sector with DHS support

Differences from the Acquisition model:
- Primary criteria for partner selection is market penetration, agility, and performance/price ratio
- Product development is not funded by DHS
- Government involvement is limited to inherently governmental functions (e.g., Grants and Standards)

Source: Senior Executive Brief to Secretary Chertoff, Deputy Secretary Schneider and Leaders of G-7
Commercialization Process

PHASE I
Capstone IPT
- Assess Capability Gap
- Formulate EHCs

CG/EHC

PHASE II
Sponsor and S&T
- Develop Operational Requirements & CONOPS
- Perform Technology/System Feasibility Study

ORDs
- System Studies

PHASE III
Sponsor and S&T
- Technology Scan/Market Survey
- Publish ORD, System Studies & PAM on website
- Mkt. Comm./PR Efforts

Outreach Program Activities
- Assess & Choose Strategic Private Sector Partners
- Technology Transfer/Grants (if required)

PHASE IV
Sponsor and S&T
- Responses from Private Industry
- New COTS product marketed by Private Sector with DHS support:
  - SAFETY Act
  - Standards
  - Public Relations
  - Marketing Communications

PHASE V
- Executed Agreement with Private Sector and DHS

Legend:
EHC – Enabling Homeland Capability
CG – Capability Gap
ORD – Operational Requirements Document
CONOPS – Concept of Operations
PAM – Potential Available Market
COTS – Commercial Off The Shelf

“Commercialization” – The process of developing markets and producing and delivering products or services for sale.

Source: Senior Executive Brief to Secretary Chertoff, Deputy Secretary Schneider and Leaders of G-7
**Contact with the Private Sector**

- **Initial Contact with Private Sector***
- **Private Sector requests more information**
- **“Full Response Package” sent to requestors, usually within same day**

*Private Sector includes Venture Capitalist and Angel Investor Communities

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**Invited Speeches/Presentations**
- Congressional Referrals
- Conference Attendance
- Seminar Hosting
- Published Articles
- Word of Mouth
- DHS Website

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- “Opportunities for the Private Sector”
- *Developing Operational Requirements*
- “High Priority Technology Needs”
- SECURE Program CONOPS
- Example Company Overview Document
- Operational Requirements Document Template
S&T Transition Capstone IPTs
Members and Function

- Industry Board of Directors Model
- Consensus-driven Process

End Result:
Prioritized Investments in S&T
DHS S&T Capstone IPTs
Gathering Mechanism for Customer Requirements:

Information Sharing/Mgmt
- OIA
- Acquisition
- C2I
- OOC

Border Security
- CBP/ICE
- Acquisition
- Borders/ Maritime
- Inspector/Agents

Chem/Bio
- IP/OHA
- Acquisition
- Chem/Bio
- End User

First Responders
- DHS 1st Responder RDT&E Coordinating Council
- S&T 1st Responder Coordination
- T&E Standards

Maritime Security
- USCG
- Acquisition
- Borders/ Maritime
- Guardsmen

Cyber Security
- CS&C
- Acquisition
- Infrastructure/ Geophysical/C2I
- Infrastructure Owners/Operators

Transportation Security
- TSA
- Acquisition
- Explosives
- Acquisition

Counters IED
- OBP/USSS
- Acquisition
- Explosives (Human Factors / Infrastructure Geophysical)

Cargo Security
- CBP
- Acquisition/ Policy
- Borders/ Maritime
- Officers/Industry

People Screening
- SCO/CIS
- Acquisition
- Human Factors
- US VISIT/TSA

Infrastructure Protection
- IP
- Acquisition
- Infrastructure/ Geophysical
- First Responders

Interoperability
- FEMA/OEC
- Acquisition
- C2I
- Infrastructure/ Geophysical

Prep & Response
- FEMA
- Acquisition
- First Responders
Cargo Security
Representative Technology Needs

- Enhanced screening and examination by non-intrusive inspection
- Increased information fusion, anomaly detection, Automatic Target Recognition capability
- Detect and identify WMD materials and contraband
- Capability to screen 100% of air cargo
- Test the feasibility of seal security; detection of intrusion
- Track domestic high-threat cargo
- Harden air cargo conveyances and containers
- Positive ID of cargo and detection of intrusion or unauthorized access

Establishment of Project IPTs: Detailed Specifications/Requirements

- Members:
  - S&T Program Manager(s)
  - Operating Component's Program Manager(s)
  - End-User(s)
  - Supplier/Provider
- Meet at Least Monthly
- Report to Capstone IPT Quarterly
Requirements Hierarchy (TSA example)

The Component develops operational requirements consistent with organizational missions.

DHS Mission – Strategic Goals ("Prevent terrorist attacks")
TSA Mission ("Protect traveling public")
Mission Need/Capability Gap ("Reduce threats to traveling public")
Operational Requirement ("Capability to detect firearms")

Performance Requirement ("Metal detection & classification")
Functional Specification ("Detect metal > 50 gm")
Design Specification ("MTBF > 2000 hours")
Material Specification ("Use type FR-4 epoxy resin")

Each lower-level requirement must be traceable to a higher-level requirement.

Source: Senior Executive Brief to Secretary Chertoff, Deputy Secretary Schneider and Leaders of G-7
ORD: Operational Requirements Document

**What:** ORDs provide a clear definition and articulation of a given problem.

**How:** Training materials have been developed to assist drafting an ORD.


**When:** For Use in Acquisition, Procurement, Commercialization and Outreach Programs –Any situation that dictates detailed requirements (e.g. RFQ, BAA, RFP, RFI, etc.)

**Why:** It’s cost-effective and efficient for both DHS and all of its stakeholders.
“Good” ORDs

• Solution Agnostic

• Take into account the varying needs and wants of markets/market segments/market sub-segments

Define Problem
Conduct Research
Data Collection
Interpret and Analyze

Verify results to reach consensus-based articulation of the problem

“Strive for excellence, not perfection!”

Source: Kaufman, et. al.
Evolution of Change:
DHS Providing Better Information about its Needs

DoD, DoE, DHS, DoJ, DoT, etc.

Science & Technology Directorate

Capstone IPT Process (August 2006)

Requirements Development Guide (May 2008)

Developing Operational Requirements (Nov. 2008)

Harnessing the Valuable Experience and Resources of the Private Sector (Feb. 2009)

Semantic Web 3.0 (The Future)

DHS, First Responders, CI/KR

Federal Stakeholders

Industry
Business, Venture Capital/Angel Investment, Strategic Partnerships
Does this look familiar?!
Getting on the “Same Page”

- Historical Perspective
- Language is Key
- Communication is Paramount
## Technology Readiness Levels (TRLs): Overview

TRLs are NASA-generated and Used Extensively by DoD

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<th>Technology Maturity</th>
<th>Basic</th>
<th>Advanced</th>
<th>Applied</th>
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<td>1</td>
<td>Basic principles observed and reported</td>
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<td>2</td>
<td>Technology concept and/or application formulated</td>
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<td>3</td>
<td>Analytical and experimental critical function and/or characteristic</td>
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<td>4</td>
<td>Component and/or breadboard validation in laboratory environment</td>
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<td>5</td>
<td>Component and/or breadboard validation in relevant environment</td>
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<td>6</td>
<td>System/subsystem model or prototype demonstration in a relevant environment</td>
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<td>7</td>
<td>System prototype demonstration in a operational environment</td>
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<td>8</td>
<td>Actual system completed and 'flight qualified' through test and demonstration</td>
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<td>9</td>
<td>Actual system 'flight proven' through successful mission operations</td>
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TRL Correlation: DHS and Private Sector
Conservative Estimate: Number of First Responders in the US

- Homeland Security Presidential Directive 8
- Steve Golubic (FEMA)

Total: > 25.3 Million Individuals

Front Line: > 2.3 Million

Support to Front Line: > 23 Million

Categories:
- FIRE
- POLICE
- EMT
- BOMB DISPOSAL
- Port Security
- Public Health
- Hospitals
- Transportation
- Emergency Management
- Clinics
- Public Works/Utility
- School Security
- Venue Security
- Response Volunteers
### Critical Infrastructure Key Resources (CIKR)

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<th>Agriculture and Food</th>
<th>Banking and Finance</th>
<th>Chemical</th>
<th>Commercial Facilities</th>
<th>Emergency Services</th>
<th>Materials, Reactors and Equipment</th>
<th>Telecommunications</th>
<th>Transportation</th>
<th>Information Technology</th>
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Call to Action: Mutual Benefits
Create “Win-Win-Win” Relationships

1. Learn Current DHS Needs

2. Inform DHS of Products/Capabilities
   Request DHS – S&T Full Response Package at thomas.cellucci@dhs.gov

3. Interact with DHS
   Establish Mutually-beneficial Relationship

Inform DHS of Products/Capabilities
Request DHS – S&T Full Response Package at thomas.cellucci@dhs.gov

Interact with DHS
Establish Mutually-beneficial Relationship

Learn Current DHS Needs
## SECURE Program

“Mutually-Beneficial Goals Achieved Through Rigorous Process”

<table>
<thead>
<tr>
<th>Goals</th>
<th>Process</th>
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<tbody>
<tr>
<td><strong>S</strong>ystem</td>
<td><strong>Alignment to DHS</strong></td>
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<td><strong>E</strong>fficacy</td>
<td><strong>Detailed Requirements</strong></td>
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<td><strong>R</strong>elevance</td>
<td><strong>Product Development</strong></td>
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<td><strong>E</strong>valuation</td>
<td><strong>Product Launch, Sales and Marketing</strong></td>
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<td><strong>Customer-Focused Capstone</strong></td>
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<td><strong>IPT Process</strong></td>
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<td><strong>Third-party Test &amp; Evaluation</strong></td>
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<td><strong>with DHS Validation</strong></td>
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</table>
Input Function for SECURE

SECURE Program

- DHS Operating Components
- Other DHS Organizational Elements
- First Responders
- Critical Infrastructure/Key Resources
- Capstone IPT

Operational Requirements
**SECURE Program**

**Concept of Operations**

1. **Application** – Seeking products/technologies aligned with posted DHS requirements
2. **Selection** – Products/Technologies TRL-5 or above, scored on internal DHS metrics
3. **Agreement** – One-page CRADA-like document. Outlines milestones and exit criteria
4. **Publication of Results** – Independent Third-Party T&E conducted on TRL-9 product/service. Results verified by DHS, posted on DHS web-portal

**Benefits:**
- Successful products/technologies share in the imprimatur of DHS
- DHS Operating Components and First Responders make informed decisions on products/technologies aligned to their stated requirements
- DHS spends less on acquisition programs → Taxpayers win.
Why SECURE Program

• Multi-Use
  - Provides private sector, in an open and transparent way, with what they need most - Business Opportunities
  - Provides assurance to DHS, First Responders and private sector users (like CI/KR) that products/services perform as prescribed (and provides vehicle for First Responders, CI/KR owners and operators to voice their requirements)
  - Augments the value of the SAFETY Act

• Saves Money
  - Private Sector uses its own resources to develop products and services to the benefit of the taxpayer and the Federal Government

• Creates Jobs
  - Detailed articulation of requirements coupled with funded large, potential available markets yield OPPORTUNITY that yields Job Creation (it’s better to teach a person to fish than to give them a fish)
  - Enables small firms with innovative technologies to partner with larger firms, VCs and angel investors because of the credibility of having government show detailed requirements with associated market potential (instead of just their own business plans).

• Efficient Use of Government Funds
  - Articulating detailed requirements saves time and money. It is better for Government to spend funds to procure products or services that are available for sale and rigorously tested compared to spending money and time to develop new solutions for ill-defined problems.
## SECURE Program
### Benefit Analysis “Win-Win-Win”

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

Open For Business centralizes information to let every business in America work with the Department of Homeland Security. Designed to assist the community, we include links to contracts, grants, small business opportunities, and development and contacts.

Spotlight
- **Information Technology Acquisitions** Homeland Security is establishing two department-wide contracts for information technology services and commodities.
- **E-Verify Program** allows employers to check employees' eligibility. Under Secretary for Management Paul Schneider encourages vendors to participate. Read more (PDF, 2 pages - 223 KB).

Programs and Services
- **Acquisition Policies and Regulations** Links to the Federal Acquisition Regulations and the Homeland Security Acquisition Regulations and Acquisition Manual.
- **Opportunities** Current contracting opportunities.
- **Small Business Procurement Assistance** Information on prime contractors, vendor outreach sessions, and contacts.
- **Grants** Information on the grants process.
- **Reports and Notices** Includes Acquisition Report, FAIR Act Inventory and Competitive Sourcing Activities Report.
- **Forms** Available for download.

Resources
- **SAFETY Act** - Part of the Homeland Security Act of 2002, the Support Anti-terrorism by Fostering Effective Technologies (SAFETY) Act was enacted by Congress to encourage the development and deployment of products and services that protect the nation and provide “risk management” protections for sellers of qualified security services and others in the supply and distribution chain.
- **System Efficacy through Commercialization, Utilization, Relevance and Evaluation (SECURE) Program resources for SECURE.**
Federal Business Opportunities

Sites where the Office of Procurement Operations (OPO) posts opportunities for prospective suppliers to offer solutions to DHS – S&T’s needs:

• www.FedBizOpps.gov
• https://baa.st.dhs.gov/
• https://www.sbir.dhs.gov/
• www.Grants.gov

take advantage of...

• **Vendor Notification Service**: Sign up to receive procurement announcements and solicitations/BAA amendment releases, and general procurement announcements. [http://www.fedbizopps.gov](http://www.fedbizopps.gov)

• **S&T’s Solicitation Portal**: The Department of Homeland Security Science and Technology Directorate currently has several active Solicitations on a broad range of topics. Relevant information is posted and access to the teaming portal, conference registration and white paper/proposal registration and submission is provided, as applicable. In addition, historical information about past Solicitations and Workshops is maintained. [https://baa.st.dhs.gov](https://baa.st.dhs.gov)

• **Truly Innovative and Unique Solution**: Refer to Part 15.6 of the Federal Acquisition Regulation (FAR) which provides specific criteria that must be met before a unsolicited proposal can be submitted to Diane Osterhus. [http://www.acquisition.gov/far/current/html/Subpart%2015_6.html](http://www.acquisition.gov/far/current/html/Subpart%2015_6.html)

**Contact Information:**
Diane Osterhus
Department of Homeland Security
Office of the Chief Procurement Officer
245 Murray Dr., Bldg. 410
Washington, DC 20528
unsolicited.proposal@dhs.gov
202-447-5576
Show Us the Difference…

Hall’s Competitive Model

As a function of:
- Market
- Application
- Technology

Differentiation = (A+B)C/(D+E)
More Opportunities with DHS Science and Technology
SAFETY Act
Support Anti-Terrorism by Fostering Effective Technologies Act of 2002

- Enables the development and deployment of qualified anti-terrorism technologies
- Provides important legal liability protections for manufacturers and sellers of effective technologies
- Removes barriers to industry investments in new and unique technologies
- Creates market incentives for industry to invest in measures to enhance our homeland security
- The SAFETY Act liability protections apply to a vast range of technologies, including:
  - Products
  - Services
  - Software and other forms of intellectual property (IP)

Examples of eligible technologies:
- Threat and vulnerability assessment services
- Detection Systems
- Blast Mitigation Materials
- Screening Services
- Sensors and Sensor Integration
- Vaccines
- Metal Detectors
- Decision Support Software
- Security Services
- Data Mining Software

Protecting You, Protecting U.S.
Criteria as stated in the SAFETY Act

- Is it an Anti-Terrorism Technology?
- Is it effective and available?
- Does it possess large potential third party liability risk exposure?
- Does Seller need SAFETY Act?
- Does it perform as intended?
- Does it conform to Seller’s specifications?
- Is it safe for use as intended?

Addition SAFETY Act information…
Online: www.safetyact.gov Email: helpdesk@safetyact.gov
Toll-Free: 1-866-788-9318
## Award Criteria

<table>
<thead>
<tr>
<th>Developmental Testing and Evaluation (DT&amp;E)</th>
<th>Designation</th>
<th>Certification</th>
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<tr>
<td>Needs more proof, has potential</td>
<td>Demonstrated effectiveness, i.e. Developmental testing (with confidence of repeatability)</td>
<td>Consistently proven effectiveness, i.e. operational performance (with high confidence of enduring effectiveness)</td>
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</table>

### Protection
- Liability cap
  - only for identified test event(s) and for limited duration (=3yrs)
  - for any and all deployments in 5-8 year term
- Government Contractor Defense (GCD)
  - for any and all deployments in 5-8 years term

### Examples
- EDS not yet TSL Certified
- Novel incident pattern matching service
- Radiological detector with laboratory success Opt-out screeners, only similar projects completed
- EDS TSL Certified
- Well-documented infrastructure protection service with history of excellent performance and meeting DoE standards

EDS=Explosive Detection System  TSL=Transportation Security Laboratory (TSA)
Department of Homeland Security - Science & Technology Directorate - SBIR Program - Microsoft Internet Explorer

https://www.sbir.dhs.gov

The DHS S&T SBIR FY02 solicitation closed on July 8, 2002.

Safety Act

Other Funding Opportunities

Topic Recommendations
The mission of TechSolutions is to rapidly address technology gaps identified by Federal, State, Local, and Tribal first responders

• Field prototypical solutions in 12 months
• Cost should be commensurate with proposal but less than $1M per project
• Solution should meet 80% of identified requirements
• Provide a mechanism for Emergency Responders to relay their capability gaps
  • Capability gaps are gathered using a web site (www.dhs.gov/techsolutions)
• Gaps are addressed using existing technology, spiral development, and rapid prototyping
• Emergency Responders partner with DHS from start to finish

Rapid Technology Development
Target: Solutions Fielded within 1 year, at <$1M
# Getting Involved: S&T Contacts

<table>
<thead>
<tr>
<th>Division</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jim Tuttle</td>
<td><a href="mailto:SandT.Explosives@dhs.gov">SandT.Explosives@dhs.gov</a></td>
</tr>
<tr>
<td>Beth George</td>
<td><a href="mailto:SandT.ChemBio@dhs.gov">SandT.ChemBio@dhs.gov</a></td>
</tr>
<tr>
<td>David Boyd</td>
<td><a href="mailto:SandT.CCI@dhs.gov">SandT.CCI@dhs.gov</a></td>
</tr>
<tr>
<td>Anh Duong</td>
<td><a href="mailto:SandT.BordersMaritime@dhs.gov">SandT.BordersMaritime@dhs.gov</a></td>
</tr>
<tr>
<td>Sharla Rausch</td>
<td><a href="mailto:SandT.HFD@dhs.gov">SandT.HFD@dhs.gov</a></td>
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<tr>
<td>Chris Doyle</td>
<td><a href="mailto:SandT.IGD@dhs.gov">SandT.IGD@dhs.gov</a></td>
</tr>
<tr>
<td>Rich Kikla</td>
<td><a href="mailto:SandT.Transition@dhs.gov">SandT.Transition@dhs.gov</a></td>
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<tr>
<td>Starnes Walker</td>
<td><a href="mailto:SandT.Research@dhs.gov">SandT.Research@dhs.gov</a></td>
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<tr>
<td>Roger McGinnis</td>
<td><a href="mailto:SandT.Innovation@dhs.gov">SandT.Innovation@dhs.gov</a></td>
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</tbody>
</table>
Summary

Detailed Requirements
Sizeable Market Potential
Delivered Products – PERIOD!

How Can You Afford NOT to Partner with DHS?

Questions/Comments:
Thomas A. Cellucci, Ph.D., MBA
thomas.cellucci@dhs.gov
U.S. Department of Homeland Security: Science and Technology Directorate’s Chief Commercialization Officer

Thomas A. Cellucci, PhD, MBA was recently appointed Chief Commercialization Officer for the Department of Homeland Security’s Science and Technology (S&T) Directorate. The Chief Commercialization Officer (CCO) is responsible for initiatives that identify, evaluate and commercialize technology for the specific goal of rapidly developing and deploying products and services that meet the specific operational requirements of the Department of Homeland Security’s Operating Components and its end users. The CCO also develops and drives the implementation of DHS-S&T’s outreach with the private sector to establish and foster mutually-beneficial working relationships to facilitate cost-effective and efficient product/service development efforts.

Cellucci is an accomplished serial entrepreneur, seasoned senior executive and Board member possessing extensive corporate and VC experience across a number of worldwide industries. Profitably growing high technology firms at the start-up, mid-range and large corporate level has been his trademark. In 1999, he founded a highly successful management consulting firm--Cellucci Associates, Inc. -- that raises capital and provides strategic business services to top-tier global high technology firms. He serves on both public and private Boards and has authored or co-authored over 120 articles on Nanotechnology, Laser physics, Photonics, Environmental disturbance control, MEMS test and measurement, Mistake-proofing enterprise software, and Sales & Marketing. He has also held the rank of Lecturer or Professor at institutions like Princeton University, University of Pennsylvania and Camden Community College. Cellucci also co-authored ANSI Standard Z136.5 “The Safe Use of Lasers in Educational Institutions”.

As a result of his consistent achievement in the commercialization of emerging technologies, Cellucci has received numerous awards and citations from industry, government and business. Cellucci earned a PhD in Physical Chemistry from the University of Pennsylvania, an MBA from Rutgers University and a BS in Chemistry from Fordham University. He has also attended and lectured at executive programs at the Harvard Business School, MIT Sloan School, Kellogg School and others. Dr. Cellucci is regarded as an authority in rapid time-to-market new product development and is a frequent public speaker.