Essential Technology Task Force

Homeland Security Advisory Council

June 25, 2008

Homeland Security

Essential Technology Task Force

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Homeland Security

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June 25, 2008

Secretary Michael Chertoff
U.S. Department of Homeland Security
Washington, D.C. 20528

Dear Mr. Secretary,

I am pleased to present to you the final report of the Homeland Security Advisory Council's Essential Technology Task Force.

Per your direction, the Homeland Security Advisory Council established the Task Force to provide recommendations for acquiring technologies critical to meeting the Department's mission of maintaining a robust, flexible, and resilient homeland security capacity when both threat and technologies are rapidly changing. As directed, the Task Force began assessing the utility of using alternative legal and financing tools to acquire the essential technologies by consulting key subject matter experts from the public and private sectors.

During the course of the Task Force's research and deliberation, it became clear that, as a precondition for employing alternative financing tools, the Department must improve its overall requirements and acquisition processes so that it has the capability of assessing the merits of varying legal and financial mechanisms. The Task Force believes that when a robust, comprehensive acquisition strategy is in place, DHS will have the necessary internal capability to effectively decide among the legal, financial, and operational options associated with alternative acquisition approaches.

The findings that led the Task Force to make its recommendations are laid out in the attached report, which the HSAC has reviewed and approved.

- Recommendation 1: Build a high performance acquisitions function implemented by capable staff.

- Recommendation 2: Adopt a rigorous Department-wide requirements management process.

- Recommendation 3: Develop a Department-wide acquisition strategy with a clear implementation plan.

- Recommendation 4: Improve engagement with the private sector in the acquisitions process.

- Recommendation 5: Manage innovation through a variety of approaches.

- Recommendation 6: Use the regulatory and standards setting role of DHS to generate economies of scale across markets.

- Recommendation 7: Continue to advocate for the reduction of Congressional committees overseeing DHS.

The Task Force also received several briefings from the Transportation Security Administration (TSA) on alternative approaches to financing in-line baggage screening systems and innovative ways of improving passenger screening. Although these briefings did not fall within the ultimate scope of the tasking, the Task Force was impressed with TSA's forward thinking initiatives and endorses both the recommendations of the prior Baggage Screening Investment Study, as well as the newly established Checkpoint Evolution, an adaptive approach to airport security.

On behalf of the Homeland Security Advisory Council membership, thank you for entrusting us with tackling an issue fundamentally important to the Department and crucial to securing our Nation.

Sincerely,

Judge William H. Webster
Chair, Homeland Security Advisory Council

Background

The post-9/11 homeland security environment requires an innovative, resilient system of operational capacities, broadly implemented across the public and private sectors. These systems should be capable of identifying and deploying the defensive measures needed within the United States, as well as beyond our borders, to secure the Nation, protect the American people from threats, and to quickly restore businesses and communities damaged by manmade or natural disasters. Technology, itself subject to rapid changes, is a critical element of our homeland security systems.

Within this context, Secretary Michael Chertoff tasked the Homeland Security Advisory Council with establishing an Essential Technology Task Force. The Task Force began by considering how to improve the Department's capability to identify, acquire, and deploy essential technologies to support homeland security needs. It evaluated the strategic, organizational, and operational steps necessary to develop this capability, and the feasibility of alternative acquisition processes and programs for acquiring essential technologies. The Task Force commends the Secretary and the Department for asking the hard question: What can DHS do to improve its performance in the acquisition of essential technologies needed to support the homeland security mission? But before DHS can fully address the viability of alternate approaches in variable and heterogeneous acquisition contexts, it is necessary to first mature the Department's internal acquisition environment to include strengthening its overall requirements and acquisition capabilities in the manner recommended in this report.

The Task Force recognizes that critical stakeholders in homeland security include state, local, and tribal partners, and the private sector. Since many essential technologies will be used in partnership with these stakeholders, they have a key role in the technology lifecycle, from developing requirements to implementation and sustainability.

Unlike national defense systems, homeland security systems are frequently installed and integrated within domestic business and consumer environments, presenting novel and complex issues of coordination and collaboration unique to domestic security challenges. Involvement of businesses and the public in developing new approaches to homeland security challenges will improve the implementation of technologies (from strategic to the most tactical levels), the adoption, acceptance, and integration of new systems, and the reduction of barriers working against our homeland security efforts. Involving these stakeholders in early development of new products and systems is critical to a smooth and effective deployment of homeland security solutions. In the end, the American people are the ultimate stakeholders.

The Department is making progress in identifying national needs in today's security environment. To meet its mission, DHS is adapting its management practices and absorbing essential technologies into its programs. This progress includes an update of the February 2004 *Homeland Security Strategic Plan* and the Department's Deliberate Planning Process to drive budgeting as well as the hiring, training, and retention of acquisition and management staff.

Yet, much more must be done to correct what observers both inside and outside DHS view as systemic weaknesses in the Department's organizational agility and operational performance when implementing new technologies.

Notwithstanding the shortcomings we have identified in the course of our work, the Task Force offers this report with deep respect for the commitment of the many homeland security professionals we were privileged to meet throughout the course of this effort.

Process Description

The Task Force met in person and by teleconference on multiple occasions between September 2007 and May 2008. Task Force members shared their own public and private sector experiences in technology development, transactions, and transformations. Members also sought the views of public and private sector subject matter experts, many of whom are or have been participants in contracts involving technology acquisitions for DHS and other federal agencies and departments. We also heard the views of staff representatives of Congressional committees, the Government Accountability Office (GAO) and of the Office of Management and Budget (OMB). Based on this input, the Task Force developed a set of **findings** that form the basis for the following **recommendations** concerning a department-wide acquisitions program. The results are presented to the Secretary for consideration.

Findings

The Department is suffering from systemic weaknesses in its ability to accept and manage change in technologies essential to its missions. Many of these ongoing weaknesses have been identified in GAO reports, Congressional oversight hearings, and media reports. A contributing factor is that after five years in existence, the Department does not have a homeland security strategic planning process that provides a coherent, objectively measurable, and repeatable method for setting program and budgetary priorities and trade-offs among the long list of possible desired operational end states. The DHS strategic plan must have clearly defined objectives with tactical, measurable steps for achieving those objectives.

Without a comprehensive strategic plan, DHS lacks robust, department-wide methods for establishing requirements and priorities across multiple missions and components. As a result, major stakeholders in homeland security, to include the public, Congress, GAO, OMB, and the contractor community, lack confidence in the Department's ability to effectively set clear priorities and develop multi-year programs and budgets. Until DHS develops an effective requirements identification, validation, and prioritization process, it is unlikely to see the more flexible budgetary authority afforded to other federal departments. The Task Force acknowledges the Department's current efforts to develop such a process, but in order for it to be fully effective, a comprehensive and robust acquisition process must complement it.

There are accepted standards, processes, and principles that DHS can adopt to make technology acquisition more effective now and in the long run. A disciplined distribution of financial, program execution and mission risk between DHS and its vendors will provide the Department with cost or operational advantages in particular acquisitions. Currently, DHS is not effectively using acquisition options, including leases and contract services, permitted by existing legal authorities and the Federal Acquisition Regulations. Only with robust requirements and acquisition capabilities and processes in place will the Department be better able to analyze different procurement tactics and trade-offs in large-scale department-wide acquisitions, including capital investment programs, strategic sourcing, services contracts, and grants.

Having the right people, processes, tools, and training in place within DHS is key to having the capacity to successfully execute department-wide technology projects. All four of these elements are indispensable components in building this capacity within DHS. The Task Force understands that developing this capacity will require a multi-year effort by DHS leadership, fully supported by the OMB and Congress, in collaboration with appropriate departments and agencies at all levels.

PEOPLE

DHS simply lacks the number of people needed department-wide to manage the acquisition process of procuring, deploying, and executing programs and technologies. Although the establishment of the Acquisition Program Management Division (APMD) in the Chief Procurement Office is a solid start, APMD is currently understaffed and will not be fully staffed until FY 2010. This includes determining measurable requirements, developing, and executing an acquisition strategy, developing the appropriate contract vehicles and incentives to support the acquisition strategy, overseeing implementation, monitoring contractor performance, and making adjustments to deal with changing mission requirements and threats. While some of the component agencies have made great strides in this area (such as the Coast Guard's efforts to systemically correct inadequacies in the early life of its Deepwater program), the Department needs to hire and develop the right number of people, across all components and headquarters, who have the ability and the experience to support all aspects of complex acquisitions. While it must be noted that this problem is not unique to DHS but plagues the entire federal government, the problem is particularly acute to DHS because of its relative early stage of organizational maturity and the accelerated demand for homeland security solutions.

PROCESSES

DHS is currently developing a Deliberate Planning Process. The Department must ensure that this program is linked to its new Quadrennial Homeland Security Review (QHSR) and its new Office of Net Assessment (ONA), which are both under development. Until these pieces are in place and linked, DHS acquisition will remain hampered, lacking an overarching process that ties present budgetary expenditures to future requirements. Ideally, the ONA will identify and review long-range future threats and vulnerabilities and compare them to present capacity, thereby developing an ongoing, robust gap analysis. That gap information would then be fed into a QHSR process, aligning the Department's mid-range strategic plan. This process would lay the groundwork for creating and requesting budgets that support bridging both present and anticipated operational gaps with focused initiatives that are both material (e.g. programs or projects) and non-material (e.g. changes in doctrine or training).

TOOLS

The Department needs to develop and field the right tools to perform and manage a sophisticated life-cycle acquisition process. These tools include procurement, systems engineering, logistics, test and evaluation, and financial analysis. With the right tools in place, DHS can better pursue alternative acquisition approaches such as multi-year budgeting, franchise funds, and "fly-on" competitive funding models for research and development in which contractors are provided research and development funds through a competitive arrangement. An example of the "fly-on" model is the Air Force's development of fighter planes, where money is provided to several contractors to develop prototypes and then a winner is selected after a competition. Winning contractors get additional funding to implement successful, working solutions. This competitive model might work for some DHS technology needs if selectively applied and justified.

Despite substantial resources, including regulatory and standards-setting capabilities, the Department has been unable to exercise its leverage to generate scalable commercial markets for security products and services, which could reduce costs and increase the utility and reliability of the products purchased by DHS and its homeland security partners. For example, airports and seaport security provide ample opportunity to develop large scale contract vehicles that reduce costs. Currently, each airport and seaport is an individual buyer of goods and services. By aggregating requirements and setting standards, DHS enlarges the market for the goods and services it procures, creating economies of scale. The challenge will be to develop these standards and contract vehicles in a manner that still allows for the flexibility to adapt standard goods and services in heterogeneous contexts and to make adjustments midstream as both threats and the technologies change. This approach is particularly powerful in department-wide services contracting and in strategic sourcing of major technology acquisitions.

TRAINING

The lack of trained and experienced DHS acquisition personnel creates an inability to adequately supervise private sector system integrators or to communicate with the program's intended operators throughout the program's conception, development, and support phases. This leads to inconsistent and sometimes ineffective program execution, as well as program delays, cost overruns, and dissatisfied operators. To address this weakness, DHS should better utilize existing government training programs while developing its own training system for acquisition professionals. This is necessary to ensure a steady stream of competent, motivated individuals who are adaptive within a changing technology environment and can effectively do this important work.

The Task Force commends the current centralized acquisition training initiative underway by the Chief Procurement Office's Acquisition Workforce branch. The initiative capitalizes on existing acquisition training sources such as the Federal Acquisition Institute and the Defense Acquisition

University (DAU). Additionally, the DHS program offers a complement of acquisition training provided by commercial vendors and through a unique partnership with DAU. Paramount to the success of this initiative, however, is ensuring that needed training resources are protected from reallocation to non-training programs.

While not equipping itself with the right people, processes, tools, and training has created acquisition challenges for the Department, the Task Force recognizes that there are also external impediments to the development of robust DHS requirements and acquisition processes; most significantly the complicated legislative oversight environment in which the Department operates. Congress's complex and conflicted authorization and appropriations process, with 86 Congressional committees asserting varying degrees of oversight over DHS, has impeded the Department's ability to develop the coherent department-wide processes identified above.

Recommendations

1. Build a High Performance Acquisitions Function Implemented by Capable Staff

DHS must continue to build, and Congress must fund, a capable, integrated acquisitions process at DHS headquarters and across components, executed by the appropriate number of personnel with supporting career fields expertise. These fields should include program management, systems engineering, logistics, contracting/procurement, cost estimating, business and financial management, testing, and evaluation. Procurement functions should seamlessly integrate into this acquisition model to ensure that procurement actions have the benefit of robust examination. This can only be accomplished by all the above disciplines working together.

» Currently, requirements for various department-wide programs, including their technology elements, are not well defined. As a result, contractors often are uncertain of what is required. This heightens the risk to the contractors of program changes after procurements are initiated, with corresponding cost overruns and schedule delays. DHS should consider utilizing post-procurement "award teaming" sessions (similar to the DAU "Program Startup Workshop") with contractors who win major DHS solicitations to mutually confirm implementation strategy. DHS should also assess performance of acquired technologies throughout the acquisition process by use of robust testing and evaluation processes.

» DHS should perform a systems analysis of its acquisition processes, from concept generation through fielding and sustained operations, to include the requirements generation and the legislative budget evaluation processes. Based on the results, DHS should strive to develop a family of standard acquisition mechanism processes to include capital investment programs, department-level service contracts, strategic sourcing, grants, and interagency agreements for general use. The Department should also develop computerized modeling tools to test and evaluate multiple combinations of acquisition mechanisms, procurement strategies, and budgeting profiles for contemplated major acquisitions. This will assist DHS in determining an optimal acquisition approach for major efforts.

» A professional, well-staffed, and well-managed acquisition organization within DHS and its components is necessary to professionally manage the wide range of acquisition mechanisms that DHS uses. As discussed earlier, DHS has only recently started to increase the size and sophistication of its internal acquisition capability. This build-up should be a priority, accompanied by the development and use of assessment and accountability tools, such as the periodic reporting of acquisition mechanism status. These tools will enhance the internal acquisition community's ability to effectively execute its responsibilities.

In addition to the Centralized Training Program of the Chief Procurement Office's Acquisition Workforce branch mentioned above, DHS should also consider the following to build and further educate a qualified staff:

• Developing a unified Acquisitions Office reporting to the Under Secretary of Management to provide direct support to the Under Secretary's role as the Department's Chief Acquisition Officer.

• Supporting the Office of Management and Budget and the Office of Personnel Management in their efforts to quantify the adequate number of acquisition staff needed, and to facilitate improvements in the vetting of DHS requirements and acquisition budgets.

• Utilizing the services of the Federal Acquisition Institute and the Defense Acquisition University for training and studies to create acquisition aids such as computer models.

• Utilizing experienced acquisition professionals from other agencies as mentors to share knowledge and ideas.

• Consider establishing field offices in less-costly communities outside of Washington, D.C. staffed with new hire procurement workers that are trained and led by an experienced cadre.

2. Adopt a Rigorous Department-wide Requirements Management Process

DHS must integrate requirements and capabilities considerations at higher levels of management. The Department can do this by adopting a collaborative joint requirements-capabilities function managed by DHS headquarters to oversee department requirements and derivative acquisition

strategies across DHS missions and components. To properly establish capability requirements, there must be collaboration between the operational user and the management authority framed within a concept of operations.

» DHS should have a centralized authority to manage an overarching capability strategy that ensures that there are no gaps or overlaps in the capabilities portfolios that the Department establishes to support mission objectives. This body would determine the content of the capability portfolios supporting the Department's five mission areas and determine the appropriate system trade-offs across its seven components. This would allow optimal use of finite department resources and reduce duplication within capability areas shared across the Department's components.

For example, Customs and Border Protection's Automated Customs Environment (ACE) is a technology platform with potential application across other components and missions. Another example is the Coast Guard's acquisition of the airborne radar and C3 systems to detect aircraft and vessels for its Deepwater Program. These systems may have direct application to Immigration and Customs Enforcement's air and marine interdiction operations. The Task Force acknowledges and endorses the Department's current efforts to establish such a strategy by incorporating the efforts of various offices into one streamlined approach.

» This centralized approach will also allow DHS to define explicit criteria for inserting capabilities and technologies across components and missions. This approach has the potential to strongly incentivize potential bidders, who would be presented with an increased market for a given product due to its multiple applications across components while meeting departmental-wide goals. These goals could include bidders who design less expensive, flexible systems that remain cutting edge yet are capable of software upgrades, with components that employ modular, scalable designs. DHS should

also maintain flexible strategies that enable changes in program, products, or vendors in order to effectively respond to changes in the threat environment, changes in the competitive landscape, or advances in technology.

This approach would also permit DHS management to set acquisition strategies that employ the full range of acquisition mechanisms, including purchase, leases, grants, capital investment programs, and enterprise service contracting as appropriate, in order to achieve best value and increase the life and flexibility of acquired Departmental capabilities.

3. Develop a Department-wide Acquisition Strategy with a Clear Implementation Plan

DHS should produce a departmental acquisition strategy with a clear implementation plan that has a definitive timeline for execution. Together this strategy and plan should allow for rigorous management, priority-setting, and budgetary decision-making across missions and components. This strategy should be dynamic, include a variety of program life spans, and provide for changes in threat and hazards environments. The Task Force commends the Department for moving forward with the Quadrennial Homeland Security Review (QHSR) and the Office of Net Assessment (ONA), which should be linked to a department-wide capability/acquisition strategy.

» The current DHS Strategic Plan (February 2004) organizes department goals into five mission areas[1] distributed across seven components[2]. These goals are further broken down into statements of desired end states. This current strategy does not provide for enhanced decision-making with regards to a framework of priorities, solutions, or technologies that cross component and mission areas, and vary through time and threat environment. DHS is in the process of updating the current strategic plan and should incorporate such a framework for decision-making.

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[1] 1) Protect Our Nation from Dangerous People, 2) Protect Our Nation from Dangerous Goods, 3) Protect Critical Infrastructure, 4) Build a Nimble, Effective Emergency Response System and a Culture of Preparedness, and 5) Strengthen and Unify DHS Operations and Management.

[2] 1) Transportation Security Administration, 2) Customs and Border Protection, 3) Citizenship and Immigration Services, 4) Immigration and Customs Enforcement, 5) Federal Emergency Management Agency, 6) U.S. Secret Service, and 7) U.S. Coast Guard.

Each DHS component has unique mission requirements. As a result, goals and related programs organized by missions or components are not effectively integrating many technologies that provide capability across multiple areas. It also may not effectively leverage the technology and capability assessments or procured products of other departments for use in complementary missions. Simply put, an acquisitions process based on the current strategic plan will not effectively capture cross-mission or cross-component capabilities.

» A comprehensive, integrated strategy will enable DHS management to more effectively prioritize programs driven by event, time, threat, or funding and gives decision-makers the ability to make understandable trade-off decisions between systems, programs, or technologies. This strategy will also allow for requirement decisions based on cycle time, lease, purchase, or service provisions.

An example of an integrated, comprehensive strategy is IBM's *Global Movement Management; Strengthening Commerce, Security and Resiliency in Today's Networked World* authored by IBM Global Business Services[3]. Another is the Department of Defense's Office of the Under Secretary of Defense for Acquisition, Technology and Logistics' *Strategic Goals Implementation Plan* (2008)[4]. The DHS QHSR, currently under development, should provide the context in which to develop such a comprehensive acquisition strategy.

The Department should also work to implement the Homeland Security Management System set forth in the President's October 2007 *National Strategy for Homeland Security*. The second step in the Homeland Security Management System is a strategy that takes into account underlying assumptions, context, tradeoffs, and necessary resources to achieve policy goals.

» Once DHS produces such a strategy and implementation plan, the Task Force believes that government stakeholders and oversight authorities will gain confidence in the Department's ability to build programs and propose budgets based on mission, operations, time and risk-based priorities. Once confidence is gained, oversight authorities may grant the Department a more flexible budgetary authority, especially for multi-year funding, which is a necessity for more competitive pricing on large, long-term procurement contracts as well as the leeway to deal with evolving homeland security threats.

4. Improve Engagement with the Private Sector in the Acquisitions Process

The Department should engage the private sector beginning in the research and development arena through all phases of the acquisition process; from concept exploration through the lifecycle of field implementation. The Department should pursue systematic engagements with private sector experts and key allies in all these areas to identify alternative approaches to solutions and find a "best fit" to DHS mission requirements.

» The key in requesting private sector input in the DHS requirements process is to establish a collaborative partnership that facilitates a team building mentality. DHS leadership should not allow an "us versus them" mentality to interfere with the process. Potential innovative techniques might include rotational assignments where DHS representatives "embed' in contractor facilities, and other deliberately interactive techniques. The goal should be a "win, win" outcome for both parties while maintaining DHS control and oversight over the process.

» DHS should make greater use of the Request for Information (RFI) process in the Federal Register. The RFI should include lifecycle cost estimates, financing terms, and the Department's goal of maintaining program flexibility in an ever-changing threat environment. This process will allow DHS to solicit input from the private sector in a government controlled environment on issues such as appropriate technology for DHS mission

3 IBM Global Business Services (Gould, Prieto, Czerwinski). *Global Movement Management; Strengthening Commerce, Security and Resiliency in Today's Networked World.* 2007. http://www-935.ibm.com/services/us/index.wss/executivebrief/gbs/a1028853?cntxt=a1000055

4 Department of Defense Office of the Under Secretary of Defense for Acquisition, Technology and Logistics. *Strategic Goals Implementation Plan.* 2008. http://www.acq.osd.mil/goals/20080207_SGIP.pdf

needs as well as the optimal acquisition approach for both DHS and the contractor for specific types of large capability acquisitions.

» When working with the private sector, DHS has many acquisition options. A comprehensive acquisition strategy will assist DHS in making long range plans to ensure it has the budgetary flexibility to finance assets appropriately. DHS must invest in the people and processes necessary to drive standardization of procurement processes which provide win-win solutions for DHS and prospective vendors. The following are just a few financial arrangements the Department can implement to meet mission requirements:

- Leasing with Defined Termination - DHS must be able to define what will happen to the vendor's equipment and/or services once the contract has ended. This will allow vendors to provide the most advantageous price when knowing there is no risk of equipment being taken out of service at the end of the option period or contract. Such a defined "exit strategy" will create confidence from industry and increase the probability of investment in DHS projects.

- Bundled Services with Defined Termination - DHS could also achieve savings by having vendors provide equipment as part of a bundled service. DHS would receive the benefit of "bulk buying" while the vendor would maintain ownership of the equipment.

- Government Provided Equipment - The financial cost to the government of buying equipment should be lower than for a private sector owner. Unlike a private vendor, as a governmental entity, DHS pays no interest on appropriated funds used to purchase capital.

» The Task Force acknowledges that DHS has made attempts to work with the private sector through alternative approaches in its acquisitions process and commends such innovative thinking. For example, in September 2006, the Transportation Security Administration's Aviation Security Advisory Committee unanimously endorsed the recommendation of the Baggage Screening Investment Study (BSIS) established to find cost-effective, timely ways of installing checked baggage screening systems consistent with Congressional mandates and capable of implementation in the heterogeneous public/private US airport environment. BSIS

recommended creating a voluntary $3 billion tax credit bond program in which airports would issue debt to pay for infrastructure and baggage handling systems. The Federal government's contribution would be tax credits instead of direct expenditures.

The Task Force endorses the BSIS recommendation and others that allow for creative and alternative financing solutions. DHS Transportation Security Administration had planned to put this recommendation into action this year. Unfortunately, the plan is currently at a standstill, awaiting final review and approval from Congress.

» It is also important to note that mission requirements can often be met by the innovative use of non-material solutions, such as shifts in training or doctrine, or by modifying existing systems. These less-costly options should be fully investigated, in concert with the user community, before the Department requests a new system. The end goal is to deliver capability to the user. DHS acquires capacity as part of managing the lifecycle of capabilities. Technology is an enabler, not the end goal. DHS should manage the technology value chain to ensure that acquired technology matches the needs of the user.

5. Manage Innovation Through a Variety of Approaches

The Department should utilize varying approaches to maintain visibility and access to essential technologies to achieve homeland security missions. Once DHS is able to clearly identify program requirements to meet mission goals, it should work with DHS Science and Technology (S&T), the private sector, university laboratories, and foreign partners to develop and acquire the required technology through the comprehensive acquisition strategy recommended above.

» The Department should be more agile in its approach to innovation. Significant effort should be made to meet stated mission requirements by identifying and adapting existing government owned technologies or commercial off-the-shelf (COTS) systems. For example, use COTS software, leveraging commercial updates and support. Adapt processes to the COTS software instead of developing software for existing processes. Through private

sector collaboration, DHS should identify commercial systems overseeing the movement of goods, people, information, and related security features. Many of these existing systems inherently address commercial concerns that parallel homeland security vulnerabilities, and are robust, resilient, and efficient. If these capabilities cannot be found, only then should DHS undertake new research and development to meet the requirements.

» The Department should consider the example of S&T's Commercialization Process for department-wide application. This process observes that "the private sector is willing and able to use its own money, resources, expertise and experience to develop and produce fully developed products and services for DHS." This plan calls for DHS to provide the private sector with (1) detailed operational requirements and (2) a conservative estimate of potential available markets. For example, under Homeland Security Presidential Directive 8, "Federal departments and agencies that support the purchase of first responder equipment will coordinate their programs with the Department of Homeland Security and conform to the same standards." By providing detailed operational requirements to the private sector for a given piece of equipment, DHS is opening up a market of millions of first responders to the private sector.

» DHS should test and evaluate multiple low-rate production alternatives in actual operating environments. Such an evaluation enables the Department to gain confidence in the technical functionality of a given product, a more informed competitive award process, as well as the effectiveness of the intended operational architecture for its intended use.

» The Department should create an environment that allows DHS users to familiarize themselves with emerging technologies to better meet mission requirements:

- Build and maintain a hands-on technology site where key officials, program managers, and users can examine emerging technologies.
- Evaluate emerging technologies against anticipated requirements in an operational environment.

- Map next-generation enhancements to existing technologies.
- Deepen partnerships with technology-oriented colleges and universities through the "center of excellence" approach.
- Identify visionaries, inventors, and inventions with whom or with which DHS might develop sustained engagement.

» DHS S&T should continue its participation in or more fully engage existing intergovernmental technology organizations including:

- The Intergovernmental Technology Board.
- The Technical Support Working Group program under the Combating Terrorism Technology Support Office – Department of Defense and Department of State.
- NATO's Program of Work on Defense Against Terrorism (PoWDAT).
- In-Q-Tel.

» The Task Force reaffirms the recommendations of the DHS S&T study on the use of venture capital business practices. The study *Venture Capital Concept Analysis*[5] was completed by the Homeland Security Institute, with the results documented in its Final Report, December 2005.

6. Use the Regulatory and Standards Setting Role of DHS to Generate Economies of Scale Across Markets

DHS is in a position to influence standards for security products in order to generate larger markets, both nationally and internationally, and in turn decrease overall costs for homeland security products, services, and programs. Formal adoption of current standards or creating new ones, if necessary, will act as a multiplier for goods and services in the homeland security marketplace. Where DHS is a receiver of information security technology, DHS should participate in private sector standard-setting bodies to seek to assure that private sector standards allow for compatible variations needed to meet potentially more robust homeland security implementations.

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[5]   Homeland Security Institute. *Venture Capital Concept Analysis*. 2005. www.homelandsecurity.org

» A good example of allowing standards setting to positively affect the market is the DHS Science and Technology's comprehensive program. It manages standards across components for required technology, equipment, and systems. The program, which includes international standards, has positively impacted the competitive market by increasing market size, quality, and facilitating international competition, leading to lower prices.

» A department-level standards program should include a deliberate feedback of information at the strategic policy level to address differing requirements in similar markets in order to facilitate standardizing equipment and systems, increasing market size, and ultimately lowering prices.

» The DHS Safety Act offers legal liability protections and is essential for businesses that provide homeland security services and products. Liability is often a greater concern for a contractor than profit. Reduction in contractor liability will reduce a barrier to competition for businesses, especially small businesses, which have solutions for homeland security. An international equivalent to the Safety Act is necessary to energize homeland security markets in partner nations.

7. Continue to Advocate for the Reduction of Congressional Committees Overseeing DHS

One of the biggest hurdles to the Department's ability to mature and effectively address its many homeland security missions is Congress's inefficient and conflicting oversight process. Eighty-six Congressional committees and subcommittees with homeland security oversight authorities is inherently inefficient (for both Congress and DHS) and counterproductive. The cumbersome and unwieldy oversight of DHS by the legislative branch cripples the Department's effectiveness in a number of areas, including requirements development, acquisition, and budgeting.

This Task Force reaffirms the report of the 9/11 Commission recommending that Congress should reduce its homeland security oversight process to an authorizing committee and a subcommittee on DHS appropriations in both the House of Representatives and the Senate. This streamlined process would allow for clear and straightforward channels of authority to which DHS leadership can answer, allowing them to focus more on the operations of securing the homeland and less on reporting to a myriad of Congressional committees and subcommittees.

» The narrow focus of these 86 committees, many with conflicting legislative priorities, notably hinders the efforts of DHS to develop a department-wide strategy for acquisition and information technology.

» Thousands of DHS work hours are redirected from addressing the operations of the Department towards responding to Congressional requests for hearings and briefings. From January 2007 to August 2007, the Department participated in 159 hearings and nearly 1,800 briefings. On several occasions, DHS witnesses were called to testify before multiple committees on similar topics.

» The Task Force believes the Executive Branch can and should advance the case for why the current Congressional committee structures are having an adverse impact on homeland security. The solution must come from a partnership with the Executive Branch, the Department, the Office of Management and Budget, and the legislative branch. One possible solution would be a DHS "caucus" with staff to consolidate briefings and collectively engage Congressional stakeholders in DHS strategy and needs.

Acknowledgments

Appendix A:
Essential Technology Task Force Members and Staff

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