

**HOMELAND SECURITY CONTRACTING: DOES THE
DEPARTMENT EFFECTIVELY LEVERAGE EMERG-
ING TECHNOLOGIES?**

HEARING

BEFORE THE

SUBCOMMITTEE ON OVERSIGHT,
INVESTIGATIONS, AND MANAGEMENT
OF THE

COMMITTEE ON HOMELAND SECURITY
HOUSE OF REPRESENTATIVES

ONE HUNDRED TWELFTH CONGRESS

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CONTENTS

	Page
STATEMENTS	
The Honorable Michael T. McCaul, a Representative in Congress From the State of Texas, and Chairman, Subcommittee on Oversight, Investigations, and Management:	
Oral Statement	1
Prepared Statement	3
The Honorable William R. Keating, a Representative in Congress From the State of Massachusetts, and Ranking Member, Subcommittee on Oversight, Investigations, and Management	5
The Honorable Bennie G. Thompson, a Representative in Congress From the State of Mississippi, and Ranking Member, Committee on Homeland Security	6
WITNESSES	
PANEL I	
Mr. Charles K. Edwards, Acting Inspector General, U.S. Department of Homeland Security:	
Oral Statement	7
Prepared Statement	9
Mr. David C. Maurer, Director, Homeland Security and Justice Team, Government Accountability Office:	
Oral Statement	16
Prepared Statement	17
Mr. Rafael Borrás, Under Secretary for Management and Chief Acquisition Officer, U.S. Department of Homeland Security:	
Oral Statement	22
Prepared Statement	23
Dr. Tara O'Toole, Under Secretary, Science and Technology Directorate, U.S. Department of Homeland Security:	
Oral Statement	29
Prepared Statement of Henry I. Gonzalez on Behalf of the Science and Technology Directorate	30
PANEL II	
Mr. James A. Williams, Vice Chair, Homeland Security Committee, TechAmerica:	
Oral Statement	37
Prepared Statement	38
Mr. Marc A. Pearl, President and CEO, Homeland Security & Defense Business Council:	
Oral Statement	43
Prepared Statement	45
Mr. Scott Amey, General Counsel, Project on Government Oversight:	
Oral Statement	49
Prepared Statement	51

IV

Page

FOR THE RECORD

The Honorable Michael T. McCaul, a Representative in Congress From the State of Texas, and Chairman, Subcommittee on Oversight, Investigations, and Management:
Report of the Homeland Security & Defense Business Council 63

APPENDIX I

Mr. Rafael Borrás, Under Secretary for Management and Chief Acquisition Officer, U.S. Department of Homeland Security and Dr. Tara O'Toole, Under Secretary, Science and Technology Directorate, U.S. Department of Homeland Security:
Letter to Chairman Michael T. McCaul and Ranking Member William R. Keating 67

APPENDIX II

Questions From Chairman Michael T. McCaul 69

HOMELAND SECURITY CONTRACTING: DOES THE DEPARTMENT EFFECTIVELY LEVER- AGE EMERGING TECHNOLOGIES?

Friday, July 15, 2011

U.S. HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON OVERSIGHT, INVESTIGATIONS, AND
MANAGEMENT,
COMMITTEE ON HOMELAND SECURITY,
Washington, DC.

The subcommittee met, pursuant to call, at 10:00 a.m., in Room 311, Cannon House Office Building, Hon. Michael T. McCaul [Chairman of the subcommittee] presiding.

Present: Representatives McCaul, Marino, Keating, Clarke of New York, and Thompson.

Also present: Representatives Clarke of Michigan, and Meehan.

Mr. McCAUL. The committee will come to order. Good morning. I want to thank the witnesses for being here today. We have votes, I think at 11:00, so we are going to try to move this hearing as quickly as possible. Today's hearing is "Homeland Security Contracting: Does the Department Effectively Leverage Emerging Technologies?" We are going to examine the Department of Homeland Security's contract process, and whether or not the Department seeks out technologies across its components, the Federal Government and the private sector to reduce costs. I know Patrick Meehan's going to be here, I understand, in a few minutes. I ask unanimous consent that he be allowed to sit at this hearing today. Hearing no objection, it will be so ordered.

I now recognize myself for an opening statement. It's the job of Oversight to help reduce the cost of Government. With our Nation's record debt approaching \$15 trillion, we need this now more than ever. One area of the Federal Government with great potential to reduce this cost to taxpayers is the Department of Homeland Security, and specifically, in regard to its acquisition of technology. The Government Accountability Office, or GAO, has identified technology acquisition at DHS as an area of high risk, meaning DHS programs have greater vulnerabilities to waste, fraud, abuse, and mismanagement. Today our objective is to examine whether DHS leverages emerging technologies to accomplish its mission. In other words, does it properly evaluate technology that is already available? Or does it needlessly spend millions of taxpayer dollars reinventing the wheel?

Unfortunately, we know the Department of Homeland Security has already spent an enormous amount of money developing new

technologies, only to find they don't work, or that there are off-the-shelf technologies already available that could accomplish the same objectives. Just yesterday, *The Washington Post* reported that DHS plans to spend more than \$300 million on radiation detection equipment that has not been fully tested and may not work. That's according to the GAO. The *Post* also cites a DHS budget request from the General Accounting Office. Perhaps the most infamous example of this waste and abuse is the Secure Border Initiative, or SBInet, initiated in 2006 which was, in part, designed to be a surveillance system. After expending nearly \$1 billion, DHS cancelled the program because SBInet has had, and this is a quote, "has had continued and repeated technical problems, cost overruns and schedule delays, raising fundamental questions about SBInet's ability to meet the needs for technology along the border." Compare SBInet to the U.S. Army's Rapid Aerostat Initial Deployment, or RAID system. RAID was initially deployed in Afghanistan in 2003 to protect U.S. forces. It is a combination of towers and aerostats, lightweight blimp-like aerial vehicles which provide a persistent surveillance system in support of intelligence and reconnaissance needs.

We realize the mission of the Department of Homeland Security attempting to secure our borders is different from the Department of Defense. However, it seems to me the basic mission of SBInet and RAID are the same, and that is to protect the borders and to provide surveillance. So my question is: Did DHS examine RAID before attempting to develop a brand-new surveillance system at the tune of \$1 billion? If so, what kept them from using this equipment already developed by our Government? If not, what kept them from discovering it? I have personally been to the border many times to see demonstrations of other forms of DOD surveillance technology that are proven to have worked in Afghanistan and Pakistan. This equipment already exists. The research and development will not be duplicated. It is built at a fraction of the cost and it is readily available. This could save taxpayers money and secure the border much sooner than the SBInet's last predictions.

The GAO has also criticized development of SBInet, concluding DHS did not follow their own acquisition directives while developing the program. DHS had not approved key program documents until several years after acquisition had begun, and most importantly, GAO found that operational requirements for SBInet were unclear and unverifiable. These types of mistakes cost taxpayers billions of dollars. There are other examples of DHS, how we could reduce the cost to the taxpayer. The Customs and Border Protection, Transportation Security Administration and other agencies have purchased an average of \$387 million of detection equipment in each of the last 3 years. A March 2011 Inspector General audit found that DHS could save taxpayer dollars and reduce duplication by coordinating and consolidating purchases of metal detectors, explosive detection systems, and radiation detectors for screening people, baggage, and cargo. DHS components are only encouraged but not required to leverage contracts Department-wide to increase efficiencies. Additionally, in April 2011, a DHS Inspector General audit found that 10 of the 17, or 59 percent of DHS programs reviewed were acquisitions in which commercially off-the-shelf equip-

ment or existing contracts could have fulfilled the mission requirements.

As a result, the administration costs were increased without adding value to the program. One of Secretary Napolitano's top priorities is unifying the Department of Homeland Security, and supporting a One DHS policy. But unfortunately, the Secretary and this administration have failed to coordinate and integrate acquisition functions Department-wide. This has led to the failure of multiple acquisition programs and the waste of millions in taxpayer dollars. This administration needs to stop investing in high-risk acquisition programs until they can effectively manage and oversee them. We have a recommended solution for DHS to save taxpayer dollars, and that is to follow the guidance provided by the Office of Management and Budget. On February 11, 2011, the Office of Management and Budget sent out a memorandum to chief acquisition officers, senior procurement executives, and chief information officers stating, "with expenditures of over \$500 billion annually on contracts, and orders for goods and services, the Federal Government has an obligation to conduct our procurements in the most effective, responsible, and efficient manner possible." Access to current market information is critical for agency program managers as they define requirements and for contracting officers as they develop acquisition strategies, seek opportunities for small businesses, and negotiate contract terms. Our industry partners are often the best source of this information. So productive interactions between Federal agencies and our industry partners should be encouraged to ensure that the Government clearly understands the marketplace and can award a contract or order for an effective solution at a reasonable price. We must streamline the DHS contracting process, find technologies that work, and reduce the burden on the taxpayer.

[The statement of Mr. McCaul follows:]

PREPARED STATEMENT OF CHAIRMAN MICHAEL T. MCCAUL

As an oversight committee our job is to help reduce the cost of Government. With our Nation's record debt approaching \$15 trillion, we need this now more than ever before.

One area of the Federal Government with great potential to reduce this cost to taxpayers is the Department of Homeland Security (DHS)—specifically in regard to its acquisitions of technology.

The Government Accountability Office (GAO) has identified technology acquisition at DHS as an area of high risk, meaning DHS programs have greater vulnerabilities to waste, fraud, abuse, and mismanagement.

Today our objective is to examine whether DHS leverages emerging technologies to accomplish its mission.

In other words, does it properly evaluate technology that is already available? Or does it needlessly spend millions of taxpayer dollars reinventing the wheel?

Unfortunately, we know the Department of Homeland Security has already spent an enormous amount of money developing new technologies only to find they don't work or there are off-the-shelf technologies that could accomplish the same objectives.

Just yesterday, the *Washington Post* reported that DHS plans to spend more than \$300 million "on radiation detection equipment that has not been fully tested and may not work." The *Post* cites a DHS budget request from the General Accounting Office.

Perhaps the most infamous example of this is the Secure Border Initiative net (SBInet), initiated in 2006, which was in part designed to be a surveillance system.

After expending nearly \$1 billion DHS cancelled the program because "SBInet has had continued and repeated technical problems, cost overruns, and schedule delays,

raising fundamental questions about SBInet's ability to meet the needs for technology along the border." Compare the SBInet system to the U.S. Army's Rapid Airstat Initial Deployment (RAID) system.

RAID was initially deployed in Afghanistan in 2003 to protect U.S. Forces. It is a combination of towers and aerostats—light-weight, blimp-like aerial vehicles—which provide a persistent surveillance system in support of intelligence and reconnaissance needs.

We realize the mission of the Department of Homeland Security attempting to secure our borders is different from the Department of Defense, however it seems to me the basic mission of the SBInet and RAID are the same—to provide surveillance.

My question is: Did DHS examine RAID before attempting to develop a brand-new surveillance system?

If so, what kept them from using the equipment? If not, what kept them from discovering it?

I have personally been to the Texas-Mexico border to see demonstrations of other forms of DOD surveillance technology that are proven to have worked on the Afghanistan-Pakistan border.

This equipment already exists, the research and development would not be duplicated, it is built at a fraction of the cost, and is readily available. This could save taxpayers money and secure the border much sooner than SBI's last predictions of 10–15 years from now.

The GAO has also criticized the development of SBInet concluding DHS did not follow their own acquisition directives while developing the program.

DHS had not approved key program documents until several years after acquisition had begun and most importantly GAO found that operational requirements for SBInet were unclear and unverifiable.

These types of mistakes cost taxpayers billions of dollars. But there are other examples of how DHS could reduce costs to the taxpayer.

The Customs and Border Protection, Transportation Security Administration and other agencies have purchased an average of \$387 million of detection equipment in each of the last 3 years.

A March 2011 Inspector General audit found that DHS could save taxpayer dollars and reduce duplication by coordinating and consolidating purchases of metal detectors, explosive detection systems, and radiation detectors for screening people, baggage, and cargo.

At DHS, components are only encouraged but not required to leverage contracts Department-wide to increase efficiencies.

Additionally, an April 2011 DHS Inspector General audit found that 10 of the 17 (59%) DHS programs reviewed were acquisitions in which commercial-off-the-shelf equipment or existing contracts could have fulfilled mission requirements.

As a result, administrative costs were increased without adding value to the program. One of Secretary Napolitano's top priorities is unifying the Department of Homeland Security and supporting a "One DHS" policy.

Unfortunately the Secretary and this administration have failed to coordinate and integrate acquisition functions Department-wide.

This has led to the failure of multiple acquisition programs and the waste of millions of taxpayer dollars.

This administration needs to stop investing in high-risk acquisition programs until they can effectively manage and oversee them.

We have a recommended solution for DHS to save taxpayer dollars. Follow the guidance provided by the Office of Management and Budget.

On February 11, 2011, the Office of Management and Budget sent out a memorandum to Chief Acquisition Officers, Senior Procurement Executives and Chief Information Officers stating:

"With expenditures of over \$500 billion annually on contracts and orders for goods and services, the Federal Government has an obligation to conduct our procurements in the most effective, responsible, and efficient manner possible. Access to current market information is critical for agency program managers as they define requirements and for contracting officers as they develop acquisition strategies, seek opportunities for small businesses, and negotiate contract terms. Our industry partners are often the best source of this information, so productive interactions between Federal agencies and our industry partners should be encouraged to ensure that the Government clearly understands the marketplace and can award a contract or order for an effective solution at a reasonable price."

We must streamline the DHS contracting process, find technologies that work, and reduce burdens on the taxpayer.

With that I recognize the Ranking Member of the subcommittee, the gentleman from Massachusetts, Mr. Keating, for 5 minutes for the purpose of making an opening statement.

Mr. MCCAUL. I also ask for unanimous consent that Mr. Clarke from Michigan be able to sit here at the dais. Without objection, so ordered. With that, now, I recognize the Ranking Member of this subcommittee, the gentleman from Massachusetts, Mr. Keating.

Mr. KEATING. Thank you, Mr. Chairman. Thank you for having this hearing on such an important issue. I also want to thank Ranking Member of the Homeland Security Committee, Mr. Thompson, for being here, and personally want to thank him for our last hearing for assisting me at a time when I was engaged in going to funeral services for a soldier in my district who was killed in Iraq. Thank you.

I also want to welcome all our witnesses. I am particularly pleased to have the Under Secretary of Management testifying today. This is his first appearance before the subcommittee this Congress. Welcome, and congratulations on your confirmation.

As the chief architect of the Department's acquisition strategy, I look forward to receiving his input on ways to improve DHS contracting. Each year the Department spends approximately one quarter of its annual budget on procurement, making it one of the largest procurement agents in the entire Federal Government. The Department's mission, to secure the Nation from the many threats we face, spans an enormous amount of room and sectors, including aviation, border security, emergency response and importantly, cybersecurity. At the heart of this mission is the need to develop and acquire leading and innovative technologies that will keep our country ahead of our enemies on every front. To make the system work, DHS headquarters, DHS components, and the private sector must coordinate and collaborate sharing of ideas and costs.

The Science and Technology Directorate, S&T, is responsible for managing science and technology research, from development through transition, for Department components and first responders. Unfortunately, however, the Department components have oftentimes looked beyond S&T to outside sources to fulfill their needs, resulting in higher administrative costs. Since the Department's inception, it has been included on the Government Accountability Office's high-risk list, in part, according to GAO, because of its acquisition process.

The Department is now in the process of implementing a new method for managing its Department-wide acquisition strategy and hopefully this will result in better decisions and greater end-user involvement so that fiascoes like SBI-net become a way of the past.

I am, therefore, pleased to hear about this development. However, I am concerned about S&T's use of other transaction authority which is wide open for waste and abuse. The lack of oversight that has plagued the Department's acquisition process at S&T and other components and the difficulty the private sector has when attempting to bring new technology and new ideas to the Department. So I look forward to hearing from both panels on this issue. I yield back the rest of my time.

Mr. MCCAUL. The Chair now recognizes the Ranking Member of the full committee, the gentleman from Mississippi, Mr. Thompson.

Mr. THOMPSON. Thank you very much, Mr. Chairman, for convening this hearing. We are here to discuss contracting at the Department of Homeland Security and the manner in which it leverages emerging technology. In fiscal year 2010, the Department spent more than \$13 billion on more than 88,000 procurement actions. While the vast majority of these were subject to traditional rules and regulations governing Federal contracts, some were not. The Homeland Security Act of 2002 granted the Department's Science and Technology Directorate, or S&T, with the ability to use other transaction authority, or OTA. In 2012, S&T spent over \$11 million on just 10 transactions using this special authority. What troubles me about OTA is that Federal rules and laws that were created to protect businesses, taxpayers, and the Federal Government from waste, fraud, and abuse do not apply.

Most notably, the Federal Acquisition Regulation, or FAR, which serves as the benchmark for how the Federal Government does business and ensures integrity, fairness, and openness is non-existent. The same is true for the Anti-Kickback Act, the Small Business Act, the Procurement Integrity Act, and Buy America, to just name a few. While the freedoms associated with OTA may attract more businesses to S&T, it also carries significant risk for the Federal Government that may outweigh its benefits.

In September 2011, the expiration date for the Department's ability to use OTA is just 2 months away. I will therefore use this hearing, along with additional oversight by the committee, to determine where I will stand on the sunset. I am also concerned about both the management and S&T budgets that the Republican Majority recently passed in the House in the form of H.R. 1. H.R. 1 will slash S&T's budget by 61 percent below the President's fiscal year 2012 request, and 42 percent below the fiscal year 2011 levels. The damage done by these cuts will set a significant impact on S&T and perpetuate the Majority's insistence that the Department adequately fulfill its mission with inadequate funding.

I look forward to hearing from the witnesses on the impact of these cuts. Lastly, Mr. Chairman, in the 111th Congress, the House passed an S&T authorization bill introduced by my colleague, Congresswoman Clarke from New York. This bill strengthened S&T's policies, especially its acquisition framework. I look forward to receiving bipartisan support in this Congress in making that bill law. With that, I yield back the balance of my time.

Mr. MCCAUL. I thank the gentleman. Other Members of the subcommittee may submit opening statements for the record. We have a distinguished panel of witnesses here today, and I would like to make my introductions and then hear the testimony. First, Mr. Charles Edwards assumed the position of Acting Inspector General of the Department of Homeland Security in February of this year, adding to over 20 years of experience in the Federal Government. Prior to this position, Mr. Edwards served as Deputy Inspector General of the Department of Homeland Security. Thank you so much for being here today.

Next, Mr. David Maurer is the Director in the U.S. Government Accountability Office's Homeland Security and Justice Team, where he leads reviews of DHS and DOJ management issues. Previously, Mr. Maurer served as acting director in the GAO's Natural Re-

source and Environmental team, managed and led work in GAO's International Affairs and Trade Team, and was also detailed on the House Committee on Appropriations.

Next, Mr. Rafael Borrás currently serves as the Under Secretary for Management at the Department of Homeland Security, where he oversees management of the Department's budget appropriations, expenditure of funds, accounting, and finance. Prior to his appointment with the Department, Mr. Borrás served as vice president with the URS Corporation, a global engineering and services firm. He also served as deputy assistant secretary for administration in the U.S. Department of Commerce. He has great experience. Welcome here today, Mr. Borrás.

Finally, Dr. Tara O'Toole was sworn as Under Secretary of Science and Technology, or S&T, Directorate at the Department of Homeland Security in November 2009. Prior to serving at S&T, Dr. O'Toole was the CEO and director of the Center For Biosecurity at the University of Pittsburgh Medical Center, and professor of medicine and of public health at the University of Pittsburgh from 2003 to 2009. Dr. O'Toole was also one of the original members of the Johns Hopkins Center For Civilian Biodefense Strategies, serving as its director from 2001 to 2003.

Welcome, and thank you so much for being here, Dr. O'Toole. So with that, the Chair now recognizes Mr. Edwards for his statement.

**STATEMENT OF CHARLES K. EDWARDS, ACTING INSPECTOR
GENERAL, U.S. DEPARTMENT OF HOMELAND SECURITY**

Mr. EDWARDS. Good morning, Chairman McCaul, Ranking Members Thompson and Keating, and distinguished Members of the subcommittee. I am Charles K. Edwards, acting inspector general for the Department of Homeland Security, DHS. Thank you for inviting me today to testify about DHS contracting and acquisition policies. Acquisitions consume a significant part of DHS annual budget and are fundamental to the Department's ability to accomplish its mission. Acquisition management is a complex process that goes beyond simply awarding a contract. It begins with the identification of the mission need and continues with the strategy to fulfill that need while balancing cost, schedule, and performance.

My testimony today will focus on the findings in two recently completed audit reports, the Department-wide management of the detection equipment and DHS oversight of component acquisition programs. Our audit regarding the Department-wide management of the detection equipment revealed that DHS has eight different procurement officers that purchase detection equipment, including metal detectors, explosive detection systems, and radiation detectors.

While DHS has applied strategic sourcing strategies for many common-use items such as firearms, ammunition, and office supplies, the Department is not using strategic sourcing to manage its purchase of detection equipment. Components are encouraged but not required to use the strategic sourcing program, and they generally do not coordinate and communicate with each other when acquiring detection equipment. In addition to the lack of communica-

tion among components, some components did not standardize their own equipment purchases for similar missions.

For example, USCIS has 24 and CBP has 21 different models of small X-ray equipment. CBP and USCIS each have 14 different models of walk-through metal detectors to meet similar screening missions. As a result of these findings, we recommended that the Department put a mechanism in place for components to standardize purchases of similar detection equipment and identify common mission requirements. Increased coordination would offer DHS opportunities to streamline the acquisition process and improve efficiencies. Our report on DHS oversight of component acquisition programs identified other improvements that can be made to the acquisition process. After reviewing the Department's oversight of programs at or about 300 million, we concluded that while DHS generally had management oversight and controls in place, it needs to further refine policies and strengthen oversight. We identified two general areas for improvement, clearer guidance and mandated use of available tools.

We found that components needed clear guidance for determining when an acquisition was costly and complicated enough to be managed as an acquisition program or when the acquisition could be handled as a simple procurement. We recommended that the Department create a decision matrix that the components can apply in pre-planning phases of the purchasing process in order to reduce this confusion. Regarding the components' use of available tools our recommendation focused on two areas, the Next Generation Periodic Reporting System, or nPRS, and the Strategic Sourcing Program Office, or SSPO.

nPRS is an integrated system that allows the Department to track component acquisition investments. For the 17 acquisition programs we reviewed, we found the components were not completing and reporting all key information in nPRS. Moreover, some components have their own data tracking systems in place of nPRS. We recommended that the Department mandate the use of nPRS for all acquisition programs and issue improved guidance regarding nPRS reporting. We also recommended that the Department offer clearer guidance regarding the use of SSPO.

We concluded that the Department may be incurring increased costs for component procurement, or components may be conducting the same market research for procurement. We recommended that the Department make sure component personnel are at least considering the use of SSBO, the general services administration schedule and the Department-wide contracts during the planning stages of these acquisitions.

In conclusion, the Department has made considerable progress in establishing its acquisition management practices and procedures. Through improved guidance to the components and increased use of tools like strategic sourcing, the Department will continue to improve its acquisition processes. Chairman McCaul, this concludes my prepared remarks and I will be happy to answer any questions that you or other Members may have. Thank you.

[The statement of Mr. Edwards follows:]

PREPARED STATEMENT OF CHARLES K. EDWARDS

JULY 15, 2011

Good morning Chairman McCaul, Ranking Member Keating, and distinguished Members of the subcommittee: I am Charles K. Edwards, Acting Inspector General of the Department of Homeland Security (DHS). Thank you for inviting me to testify today about the Department's contracting and acquisition policies.

As you know, the DHS Office of Inspector General (OIG) was established in January 2003 by the *Homeland Security Act of 2002* by amendment to the *Inspector General Act of 1978*. The DHS OIG seeks to promote economy, efficiency, and effectiveness in DHS programs and operations and reports directly to both the DHS Secretary and the Congress. We fulfill our mission primarily by issuing audit, inspection, and investigative reports that include recommendations for corrective action, and by referring cases to the United States Attorney General for prosecution.

I am pleased to have the opportunity to testify about two of our audit reports today. I will describe some of the serious challenges facing DHS in acquisition management, the steps DHS has taken, and its progress, in addressing those challenges, as well as provide details regarding further improvements the Department can make, specifically in its oversight of components' acquisition programs and acquisition of detection equipment.

BACKGROUND

Acquisitions consume a significant part of the Department of Homeland Security's annual budget and are fundamental to the Department's ability to accomplish its mission. In fiscal year 2010, DHS awarded over \$13 billion for more than 88,000 procurement actions.

The Under Secretary for Management (USM) is responsible for the overall DHS acquisition process. As the Department's Chief Acquisition Officer, the USM is responsible for managing, administering, and overseeing the Department's acquisition policies and procedures. The USM delegates the responsibility for effective Department-wide procurement policies and procedures, including procurement integrity, to the Chief Procurement Officer (CPO). The Office of the CPO (OCPO) is responsible for oversight of most DHS acquisition activities and services, including management, administration, and strategic sourcing, and excluding financial assistance activities. OCPO responsibilities also include developing and publishing Department-wide acquisition regulations, directives, policies, and procedures.

The USM also delegates the responsibility for developing and implementing the governance processes and procedures for program management over DHS' various acquisition programs to the Acquisition Program Management Division (APMD). Separation of the OCPO procurement management responsibilities for acquiring goods and services and APMD's program management of the acquisition process provides a layered approach to DHS' acquisition oversight.

STEPS TAKEN BY DHS TO IMPROVE ITS ACQUISITIONS MANAGEMENT

In 2003, the Government Accountability Office (GAO) listed implementing and transforming the Department of Homeland Security on its high-risk list.¹ GAO stated that the Department's efforts to integrate 22 independent agencies into a single department was an "enormous undertaking," partly because many of the major components faced at least one management problem, including financial management vulnerabilities. In a 2011 update, GAO noted that acquisition management weaknesses have prevented major programs from meeting capability, benefit, cost, and schedule expectations.² To address management challenges, GAO recommended "validating key acquisition documents during the acquisition review process."³

In September 2005, we published a report identifying significant weaknesses that threatened the integrity of the Department's procurement and program management operations.⁴ We made five recommendations to address the vulnerabilities in

¹GAO-03-119, *High Risk Series: An Update* (Jan. 2003). GAO maintains a program to identify Government operations that are high risk due to greater vulnerabilities to fraud, waste, abuse, and mismanagement or the need for transformation to address economy, efficiency, or effectiveness. Since 1990, GAO has designated over 50 areas as high risk and subsequently removed over one-third of the areas due to progress made.

²GAO-11-278, *High-Risk Series: An Update* (Feb. 2011), p. 93.

³Id., 33-34.

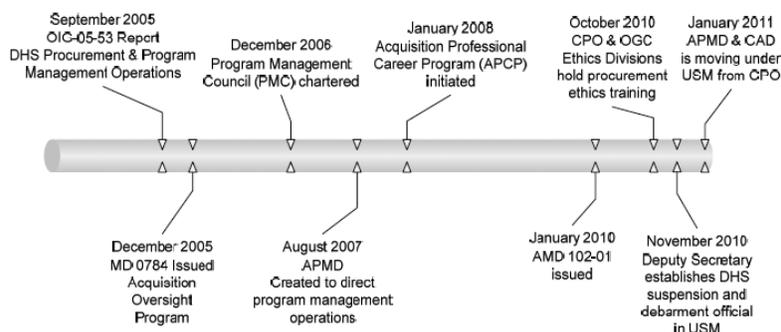
⁴OIG-05-53, *Department of Homeland Security's Procurement and Program Management Operations* (Sept. 2005).

the Department's acquisition operations. DHS concurred with all five recommendations and agreed to move ahead with expanded procurement ethics training, enhancement of oversight, and establishment of a Departmental program management office to address procurement staff shortages and staff authority. Since our 2005 report, DHS has implemented management directives and organizational changes, and developed acquisition training programs intended to identify inefficiencies in the acquisition process and prevent procurement ethics violations.

In November 2008—recognizing the continued increase in the quantity and complexity of DHS acquisitions—the Chief Acquisition Officer classified acquisitions into three levels to define the extent and scope of required project and program management and the specific official who serves as the Acquisition Decision Authority. For level 1 acquisitions (greater than or equal to \$1 billion), the Acquisition Decision Authority is at the Deputy Secretary level. For level 2 acquisitions, (\$300 million to \$1 billion), it is the Chief Acquisition Officer. For level 3 acquisitions (less than \$300 million), the Acquisition Decision Authority is at the Component Head level. Acquisition Management Directive 102-01, Revision No. 1 (Directive 102-01), also identifies specific alternate Acquisition Decision Authorities for each level.

Figure 1 is an overview of the actions DHS has taken since 2005 to improve its acquisition program.

Figure 1. Milestones in DHS Procurement and Program Management



While the Department has taken these and other significant steps to improve its acquisition oversight processes and controls, our report *OIG-11-71, DHS Oversight of Component Acquisition Programs* (April 2011) identified additional areas for improvement, including improved guidance to components regarding their use of the next Generation Periodic Reporting System (nPRS), an integrated system that provides visibility to the Department to track components' level 1, 2, and 3 acquisition investments.

ADDITIONAL DHS OVERSIGHT NEEDED FOR COMPONENT ACQUISITION

In *DHS Oversight of Component Acquisition Programs*, we recognized that the Department has made improvements to its acquisition oversight processes and controls through implementation of a revised acquisition management directive. However, the Department needs to provide additional detailed guidance and improve controls in some areas. The Department has not fully defined an acquisition program for its components, or developed consistent guidance for reporting acquisitions in its standard system. In addition, the Department did not ensure that components were using all acquisition tools available and that all components had adequate policies and procedures in place to manage acquisition programs.

As a result, components created program management offices to manage simple procurements, incurring unnecessary administrative program costs without adding value to the programs. Additionally, without adequate controls in place, the Department did not have complete visibility of all programs within its acquisition portfolio.

Unclear Guidance

The Department has not fully defined when a component should manage an acquisition under the requirements of the Acquisition Lifecycle Framework or manage it as a simple procurement. We found that many components were committed to following the Department's guidance but needed more structure for determining when

to establish a program to acquire a product or service. We requested a list of all programs from each component and received numerous questions and conflicting responses.

Directive 102-01, which prescribes guidance over the Acquisition Review Process, Acquisition Lifecycle Framework, and Acquisition Review Board, establishes the overall policy and structure for acquisition management within the Department. But the directive does not provide a decision-making tool to determine if an acquisition warrants the higher level of internal controls required by the Acquisition Lifecycle Framework. The supplemental Acquisition Instruction/Guidebook 102-01-001 (Guidebook) provides detailed instructions on implementing and managing acquisitions, but also does not provide clear instruction for determining if an acquisition should become an acquisition program, and in attempts to comply with the directive, components over classified programs.

For example, the Federal Law Enforcement Training Center (FLETC) is automating many of its manual processes, such as student registration, class scheduling, planning and forecasting, and student records. The estimated total life cycle cost of this automation is approximately \$30 million. FLETC personnel contracted out all of the requirements for the program, including requirements analysis, development, and maintenance of an automated system that used commercial off-the-shelf (COTS) equipment and custom software applications. Because of the unclear instructions, instead of creating a simple procurement, FLETC created an acquisition program that may have unnecessarily increased program management administrative cost.

We reviewed several acquisition programs that do not clearly fit into the Acquisition Lifecycle Framework process. Ten of the 17 (59%) programs we reviewed, with an estimated life cycle cost of about \$5.3 billion, were acquisitions that identified COTS equipment or existing contracts to fulfill the needs identified by the program office. Component personnel likely could have managed these as simple procurements rather than acquisition programs.

For example, the Transportation Security Administration (TSA) classified renovation of an existing warehouse building as an acquisition program. It leased the 104,000-square-foot building in 2003 and renovated approximately 89,000 square feet for about \$42 million over the initial 10-year leasing period. In 2008, TSA primarily relied on existing contracts to complete 12,500 of the remaining 15,000 square feet of the warehouse building. According to TSA personnel, the renovation for the additional 12,500 square feet cost about \$2.5 million, with construction completed in January 2010. For this small renovation project, TSA personnel could have used simple procurement rules but instead increased administrative costs by implementing the more complicated internal control structure prescribed in Directive 102-01.

Based on the definition of an acquisition program in the Guidebook, this renovation could possibly be an acquisition program. However, based on the processes and procedures laid out in Directive 102-01's Acquisition Life Cycle Framework and Acquisition Review Process, this renovation does not meet the intentions of the existing guidance or present a high enough level of risk to warrant the increased costs of being managed as a program.

Components should not create acquisition programs for acquiring products and services that are outside the intent and spirit of Directive 102-01. The Department can reduce some of the conflicts at the component level by developing a decision matrix that the components can apply in the pre-planning phases of the purchasing process.

Use of Available Tools

The APMD and the Office of the Chief Information Officer developed and currently maintain nPRS. nPRS is an integrated system that provides DHS headquarters visibility of components' level 1, 2, and 3 acquisition investments. It can also store working and approved key acquisition documents, earned value management information, and risk identification. Component personnel are responsible for entering and updating information regarding their acquisition programs in nPRS. This information includes, but is not limited to, cost, budget, performance, and schedule data. Tools available within nPRS include the following:

- Current and previous contract award data with earned value management;
- Previous, current, and future budget and funding;
- Cost, schedule, and performance status based on Acquisition Program Baseline parameters;
- Information technology program milestone schedule and cost variances;
- Acquisition Decision Memorandum forms that track action items issued by the Acquisition Review Board;

- Key documents approved by DHS headquarters or components, such as the Mission Needs Statement, Acquisition Plan, and Acquisition Program Baseline.

The Department has not ensured or mandated that components use all available tools and supporting programs, including nPRS, to provide transparency and efficiency of component acquisition programs. As a result, some components have developed systems comparable to nPRS.

According to APMD personnel, nPRS allows components to create a copy of nPRS software and integrate it to meet their needs. The copy, which is called the nPRS Sandbox, allows the components to duplicate the nPRS software and to use the already developed nPRS as their oversight tool for draft documents and approval of documentation and earned value management, as well as cost and schedule status. The component's Sandbox copy of nPRS is not visible by DHS headquarters or other components because nPRS restricts access to authorized users. As of July 2010, TSA, the Federal Emergency Management Agency (FEMA), and the DHS Chief Financial Office had requested use of the nPRS Sandbox feature.

Component personnel have developed, or are in the process of developing, their own data-tracking systems because the Department has not consistently mandated use of nPRS or its tools. For example:

- TSA hired and spent approximately \$100,000 for a contractor in 2005 to develop the TSA Acquisition Program Status Report, which served as its data-tracking system. As of June 2010, TSA had merged its acquisition program portfolio, levels 1, 2, and 3, into nPRS and will no longer use the TSA Acquisition Program Status Report. As of August 2010, nPRS is TSA's official tracking system for acquisition programs.
- FEMA, Customs and Border Protection (CBP), Immigration and Customs Enforcement (ICE), and U.S. Secret Service (USSS) use internally developed systems based on software programs such as Microsoft SharePoint.
- CBP personnel were in the process of developing an additional database to track acquisitions throughout the Acquisition Life Cycle Framework. We were not able to determine the cost of this tracking database. According to CBP personnel, the database development was a verbal agreement between CBP personnel and the contractor. The statement of work under which the contractor was performing other work for CBP did not contain any mention of the verbal agreement.

The USM has not consistently mandated and ensured that components use nPRS for all level 1, 2, and 3 acquisition programs.

Inconsistent Reporting

In addition to the fact that not all components use nPRS for all level 1, 2, and 3 acquisition programs, the information entered into nPRS was not reported consistently. For the 17 acquisition programs we reviewed, with an estimated life cycle cost of about \$9.6 billion, we found that components were not completing and reporting all key information in nPRS. Component personnel reported 16 of the 17 programs reviewed (94%) into nPRS; however, despite detailed nPRS guidance, not all reports contained the required information. For example, only 7 of 17 programs (41%) reported Acquisition Program Baseline required milestones, which establish the overall acquisition cost, schedule, and performance values. Only 13 (76%) programs reviewed contained required key documentation. Key documents include the mission needs statement, acquisition plan, operational requirements document, integrated logistics support plan, and the acquisition program baseline.

Since nPRS became operational in 2008, the Department has issued conflicting guidance and enforcement for reporting level 1, 2, and 3 acquisition programs. The conflicting verbal and written guidance confused component personnel, who were not sure whether to report all acquisition programs or only level 1 and 2 programs.

In May 2010, the USM issued a list of major acquisition programs that identified 86 level 1 and 2 acquisition programs and elevated some level 3 acquisition programs for Departmental oversight. According to APMD personnel, the USM and components jointly create the major acquisition program and project list. The APMD obtains information from nPRS and requests updated information from the components regarding their current number of acquisition programs. Once APMD personnel receive the information, they create the final list and the USM signs and issues the new list.

As of July 2010, we identified six acquisition programs listed by the USM not reported in nPRS. We also identified five level 1 and 2 acquisition programs reported in nPRS but not by the USM. When we asked USM personnel about the differences, they said that the differences were due to timing issues. However, we were not able to verify this. Table 1 compares the list of acquisition programs in the May 2010 USM memo with the nPRS database as of July 2010.

TABLE 1.—ACQUISITION PROGRAM REPORTING SYSTEM
INCONSISTENCIES

USM Memo—May 2010	nPRS Database—July 2010
Consolidated Mail System Program	No Entry.
Electronic Records Management System	No Entry.
St. Elizabeth's	No Entry.
National Security System Program	No Entry.
Online Tracking Information System	No Entry.
Federal Protective Services	No Entry.
No Entry	Critical Infrastructure Technology and Analysis.
No Entry	CBP—Infrastructure.
No Entry	FEMA—Infrastructure.
No Entry	ICE—Infrastructure.
No Entry	USSS—Infrastructure.

To identify the number of acquisition programs in the Department, we requested a list of all programs from nPRS, but the USM could provide only level 1 and 2 acquisition programs. In March 2010, we asked the components to provide us with a list of all level 1, 2, and 3 acquisition programs so we could gain a complete inventory of acquisition programs throughout the Department. Though we understand that there may be differences due to timing of our data reviews, the USM needs to make sure that components are consistently reporting all acquisition programs into the standard system. In July 2010, we obtained our last data from nPRS that showed progress regarding the number of level 3 acquisition programs components entered in the system. However, nPRS still does not reflect half of the total number of level 3 programs components reported outside nPRS.

In sum, the Department does not always know what is in its acquisition portfolio because of the conflicting written and verbal guidance provided to the components. The USM has not ensured that components report all level 1, 2, and 3 acquisition programs in nPRS, which hinders its ability to have complete visibility into component acquisition programs. By mandating use of nPRS for all acquisition programs, the USM would have visibility into components' acquisition programs and could provide better oversight for its acquisition portfolio.

We made four recommendations to the Chief Procurement Officer to strengthen management oversight and controls of component acquisition programs. The Chief Procurement Officer agreed with our recommendations and initiated corrective actions.

DEPARTMENT-WIDE MANAGEMENT OF DETECTION EQUIPMENT

Our recent audit report, *OIG-11-47, DHS Department-wide Management of Detection Equipment* (March 2011), highlighted some of the acquisition challenges facing the Department when multiple components have similar requirements or are buying the same type of equipment. We identified steps the Department can take to improve its acquisition processes. With improved management, DHS can streamline the acquisition process, improve efficiencies, and provide uniform equipment inventory information.

DHS has eight different procurement offices that purchase detection equipment. Seven of these offices are at the component level, and each has its own head of contracting. These components are as follows:

- CBP
- FEMA
- FLETC
- ICE
- Office of Procurement Operations⁵
- TSA
- United States Coast Guard (USCG)
- USSS.

Components maintain separate inventories for their detection equipment. For fiscal year 2010, the components had a combined inventory of more than \$3.2 billion worth of detection equipment, most of which is deployed. The components purchased an average of about \$387 million worth of detection equipment in each of the last

⁵In 2004, the Department created the Office of Procurement Operations to provide acquisition services to components that did not have a procurement office.

3 years, ranging from about \$280 million to \$511 million. This equipment includes metal detectors, explosive detection systems, and radiation detectors (including some personal protective safety equipment) for screening people, baggage, and cargo at airports, seaports, and land ports of entry, as well as Federal buildings.

Our audit work showed that DHS can better manage the acquisition of detection equipment by developing processes based on best practices such as strategic sourcing and developing standard data requirements and nomenclature for inventory management.

Strategic Sourcing

According to a 2005 memorandum from the Office of Management and Budget:

“Strategic sourcing is the collaborative and structured process of critically analyzing an organization’s spending and then using this information to make a business decision about acquiring commodities and services more effectively and efficiently. This process helps agencies optimize performance, minimize price, increase achievement of socio-economic acquisition goals, evaluate total life cycle management costs, improve vendor access to business opportunities, and otherwise increase the value of each dollar spent.”⁶

DHS has established a Strategic Sourcing Program and has applied strategic sourcing strategies for many common use items, such as firearms, ammunition, and office supplies; however, the Department is not managing its detection equipment through this program. According to DHS officials, components are encouraged but not required to use the Strategic Sourcing Program and generally do not coordinate and communicate when acquiring detection equipment. There is no mechanism in place for components to standardize equipment purchases or identify common mission requirements among components. For example, the Department’s Joint Requirements Council is inactive, and components do not have the expertise of commodity councils or single-item managers to rely on when acquiring detection equipment. Further, components view detection equipment as unique to their missions and do not attempt to identify common mission requirements among other components. This results in numerous inefficient purchases by individual components instead of consolidated purchases.

Standardizing Equipment Purchases

Some components did not standardize equipment purchases and purchased a variety of different detection equipment models. For example, United States Citizenship and Immigration Services (USCIS) has 24 and CBP has 21 different models of small X-ray equipment, and CBP and USCIS each have 14 different models of walk-through metal detectors. When components have multiple models of equipment to meet similar missions, DHS incurs higher procurement administrative costs and logistic support costs for maintenance, training, and support. In contrast, TSA, which uses and maintains the largest inventory of detection equipment in the Department, uses only seven different models of small X-ray equipment and three models of walk-through metal detectors. By limiting the number of models and types of equipment, TSA is in a position to increase efficiencies in procurement, maintenance, and personnel flexibilities.

Common Mission Requirements

We identified about \$170 million worth of small X-ray machines, metal detectors, and personal and hand-held radiation detectors that DHS could acquire through strategic sourcing strategies. Although multiple components were using similar equipment to meet similar screening missions, each component purchased the equipment separately. Components did not coordinate with each other to identify common requirements, consolidate purchases to gain buying power, or consolidate logistic support requirements.

DHS Management Directive 1405 (September 2003) established a Joint Requirements Council (JRC) as a senior-level requirements review board to identify cross-cutting opportunities and common requirements among DHS organizational elements for non-information technology investments. The JRC met periodically between fiscal years 2004 and 2006. Representatives on the JRC reviewed programs and processes for potential mission overlap and redundancies. Among the programs reviewed were TSA’s Secure Flight and Registered Traveler and CBP’s Consolidated Registered Traveler programs. In 2006, the JRC stopped meeting after the Department assigned the council chair to other duties. However, DHS now recognizes the

⁶Office of Management and Budget memorandum to Chief Acquisition Officers, *Implementing Strategic Sourcing* (May 20, 2005).

importance of the JRC and indicated that it might revive the council or pursue another alternative to identify duplicate programs and processes across the Department. This undertaking should include an effort to identify common data elements and nomenclature within inventories and to establish a data dictionary for the Department's detection equipment.

In addition to the JRC, commodity councils are an integral element of developing an effective strategic sourcing program. Commodity councils include representatives from across the organization. The members act as the subject matter experts in the acquisition process and in establishing requirements for a specific commodity or service. Generally, the component purchasing the largest quantity of a particular item takes the lead role in acquiring the commodity or service and may serve as that commodity's single-item manager.

DHS and other Federal agencies use the commodity council concept. For example, in 2003, DHS established the Weapons and Ammunition Commodity Council to create a Department-wide strategy for consolidating requirements and gaining economies of scale for the acquisition of weapons and ammunition. The council, which includes representatives from each component that uses weapons, developed requirements for firearms, ammunition, and body armor. ICE took the lead role, using service-level agreements with other components to establish one overall contract, which is available to all DHS entities.

Inventory Data

DHS inventory systems do not use standard inventory data elements and standard nomenclature for similar detection equipment. Currently, DHS is unable to view consolidated inventory information on detection equipment and must rely on data calls to determine its inventory, including type, model, and value of equipment on hand. Each component manages its inventory through eight separate asset management inventory systems that do not interface, are not compatible, and do not use standardized data descriptions or nomenclature based on a uniform data dictionary. DHS does not have a mechanism in place to identify and assign common data elements to these inventory systems. Without a common data dictionary based on common data elements and nomenclature, the Department is not able to efficiently verify the on-hand balances. As a result, the Department may not be able to evaluate its detection equipment requirements and develop a disciplined logistics function to manage its detection equipment.

A GAO report, *Framework for Assessing the Acquisition Function at Federal Agencies*, emphasizes data stewardship as a critical success factor in managing information systems.⁷ It identifies the need for consistency among data definitions, sources, controls, and edits routines as a best practice.

Seven of DHS' asset management inventory systems, however, are legacy systems. DHS implemented the eighth system for headquarters and those components that did not have an internal procurement function. The component legacy systems support the respective components and continue to operate in stovepipes without interfacing with other components. Headquarters relies on data calls from each component to gather Department-wide inventory information.

As part of our audit on detection equipment acquisition, the components provided us with detection equipment inventories in response to a data call. The information provided was in nonstandard formats, and data elements and nomenclature were not standardized. CBP sent 32,000 lines of data, with some entries dated as early as 1940, but its original submission still did not include all detection equipment on hand and required a follow-up request to obtain a complete universe. Unless DHS establishes a uniform or common data dictionary, the categories and data descriptions will vary among the components and the Department cannot be sure that the inventory data it relies on are complete and accurate. For example:

“One component categorized an explosive detection device as ‘detection equipment,’ another categorized it as ‘security equipment,’ while another categorized it using specific equipment names, with the nomenclature including the name of the individual assigned the equipment.”

To establish control, oversight, and visibility of the component inventories and until DHS deploys an integrated system; DHS needs to establish a common data dictionary to standardize data elements across component and headquarters systems. Establishing an inventory data dictionary will assist DHS in developing strategic sourcing strategies and support greater efficiencies in its detection equipment inventories.

⁷ GAO-05-218G, September 2005.

The Department has agreed in principle with our two recommendations, and is taking action to implement the recommendations. DHS is evaluating reestablishing the Joint Requirements Council and other alternatives to achieve the same goal. It will perform a business case analysis of detection equipment and establish a commodity council or working group if it determines that this equipment can be strategically sourced.

CONCLUSION

DHS, established by combining 22 agencies with different legacy systems, missions, and cultures, has made considerable strides in establishing its acquisition management practices and procedures. It has established oversight policies, clarified roles and responsibilities for acquisition, and worked to address staff shortages. It needs to continue improvements that affect its cohesion as a Department and its bottom line. Increased use of tools such as strategic sourcing and a commonly applied definition of an acquisition program will help the components work together to leverage resources.

Mr. McCAUL. Thank you, Mr. Edwards.
The Chair now recognizes Mr. Maurer for his testimony.

STATEMENT OF DAVID C. MAURER, DIRECTOR, HOMELAND SECURITY AND JUSTICE TEAM, GOVERNMENT ACCOUNTABILITY OFFICE

Mr. MAURER. Good morning, Chairman McCaul, Ranking Member Keating, other Members and staff. I am pleased to be here today to discuss DHS' challenges and progress in developing and acquiring new technologies to meet homeland security needs. Let's be clear. DHS has struggled to deploy new technologies. Drawing on years of work, we have identified three key steps DHS should take before spending millions or billions on new systems. First, ensure programs have clear requirements that can be met and are met. Second, complete testing and evaluation to ensure new technologies work in real-world situations. Third, conduct cost-benefit analysis to ensure that taxpayer dollars are buying systems that improve homeland security capabilities.

In recent years we have found that DHS has not always done this and, as a result, DHS ends up taking risks that multi-billion dollar programs may not deliver their expected benefits. For example, earlier this week, we reported that TSA faces significant challenges ensuring that systems to detect explosives in checked baggage meet the latest requirements. It took TSA 4 years to begin deploying systems that met enhanced requirements set in 2005. We also found that TSA lacks an overall plan to ensure the deployed systems meet requirements that were further enhanced in 2010. As a result, after spending over \$8 billion since 2001 to improve checked baggage screening, it remains unclear how long it will take and how much more it will cost to ensure systems meet requirements. This March we reported on DHS' on-going efforts to deploy a virtual fence along the Southwest border. We found that DHS made key decisions without completing an independent evaluation of system operational effectiveness and suitability. DHS developed plans to build on existing technology from the \$1.5 billion SBI-net program before completing an assessment of how well that technology works. In addition, our preliminary review raised questions about DHS' assessment of the cost effectiveness of a range of border technology options. We are currently reviewing DHS' efforts to obtain and deploy border security technologies and expect to report our findings in the fall. We have also found significant problems

with DHS' efforts to develop and deploy the advanced spectroscopic portal monitor, or ASP. DHS believes ASPs would do a better job detecting radiation than the equipment currently deployed on the Nation's borders at an estimated cost of over \$2 billion. However, among other things, we found that DHS overestimated how well ASPs worked and underestimated the cost to develop and deploy the technology. In short, it wasn't clear the program would improve DHS' primary radiation screening capabilities. As a result, in February 2010, the Secretary scaled back plans for the number of ASPs DHS would purchase and how they would be used.

Now, when you hear examples like this, it's important to remember why DHS presses the envelope. DHS faces a constant balancing act between immediate mission needs and the need to make sound, informed decisions following processes that are not designed for speed. The good news is that DHS is taking actions to address these problems. Over the past several months, DHS has issued new policies for acquisition and testing and evaluation, implemented a reorganization of the Science and Technology Directorate, and developed plans to revamp DHS' overall approach to investment decision making. These changes in plans show a clear commitment from Department leadership to take these problems head-on.

Just yesterday, we issued a report on S&T's roles ensuring DHS acquisition programs are independently tested and evaluated. We reviewed 11 major acquisition programs and found that S&T has generally been meeting its oversight requirements and acting as an honest broker in the acquisition process. In addition, last month, DHS updated its on-going efforts to improve how it makes and implements investment and acquisition decisions. Among other things, their latest plan calls for the management directorate and S&T to work together to ensure new technologies meet requirements, and critical mission needs are tested before use and have demonstrable benefits that were worth the cost.

In short, there are encouraging signs that things are changing for the better, but it is still too early to tell. In many instances, DHS needs to turn plans into concrete action that clearly demonstrates the Department is meeting requirements, testing before buying, and delivering benefits within promised costs and time frames. By doing so, DHS makes it more likely that multi-million or multi-billion dollar programs will be delivered on time, within budget, and capable of meeting critical mission needs. Mr. Chairman, thank you for the opportunity to testify this morning. I look forward to your questions.

[The statement of Mr. Maurer follows:]

PREPARED STATEMENT OF DAVID C. MAURER

JULY 15, 2011

GAO-11-829T

Chairman McCaul, Ranking Member Keating, and Members of the subcommittee: I am pleased to be here today to discuss our past work examining the Department of Homeland Security's (DHS) progress and challenges in developing and acquiring new technologies to address homeland security needs. DHS acquisition programs represent hundreds of billions of dollars in life cycle costs and support a wide range of missions and investments including border surveillance and screening equipment, nuclear detection equipment, and technologies used to screen airline passengers and

baggage for explosives, among others. Since its creation in 2003, DHS has spent billions of dollars developing and procuring technologies and other countermeasures to address various threats and to conduct its missions. Within DHS, the Science and Technology Directorate (S&T) conducts general research and development and oversees the testing and evaluation efforts of DHS components, which are responsible for developing, testing, and acquiring their own technologies. For example, the Transportation Security Administration (TSA) is responsible for securing the Nation's transportation systems and, with S&T, researching, developing, and deploying technologies to, for example, screen airline passengers and their baggage. U.S. Customs and Border Protection (CBP) is responsible for implementing measures and technologies to secure the Nation's borders. In recent years, we have reported that DHS has experienced challenges in managing its multibillion-dollar acquisition efforts, including implementing technologies that did not meet intended requirements and were not appropriately tested and evaluated, and has not consistently included completed analyses of costs and benefits before technologies were implemented.

My testimony today focuses on the key findings of our prior work related to DHS's efforts to acquire and deploy new technologies to address homeland security needs. Our past work has identified three key challenges: (1) Developing technology program requirements, (2) conducting and completing testing and evaluation of technologies, and (3) incorporating information on costs and benefits in making technology acquisition decisions. This statement will also discuss recent DHS efforts to strengthen its investment and acquisition processes.

This statement is based on reports and testimonies we issued from May 2009 through July 2011 related to DHS's efforts to manage, test, and deploy various technology programs and selected updates conducted in July 2011 related to DHS's efforts to strengthen its investment and acquisition processes.¹ For the updates, we reviewed recent DHS efforts to strengthen its investment and acquisition processes, such as a June 2011 DHS report on the Department's progress and efforts in addressing challenges identified in our biennial reports addressing high-risk management issues.² For our past work, we reviewed program schedules, planning documents, testing reports, and other acquisition documentation. For some of the programs we discuss in this testimony, we conducted site visits to a range of facilities, such as National laboratories, airports, and other locations to observe research, development, and testing efforts. We also conducted interviews with DHS component program managers and S&T officials to discuss issues related to individual programs. We conducted this work in accordance with generally accepted Government auditing standards. More detailed information on the scope and methodology from our previous work can be found within each specific report.

DHS HAS EXPERIENCED CHALLENGES IN DEVELOPING AND MEETING KEY PERFORMANCE REQUIREMENTS FOR VARIOUS TECHNOLOGIES

Our past work has found that program performance cannot be accurately assessed without valid baseline requirements established at the program start. Without the development, review, and approval of key acquisition documents, such as the mission need statement, agencies are at risk of having poorly defined requirements that can negatively affect program performance and contribute to increased costs.³ We have also identified technologies that DHS has deployed that have not met key performance requirements. For example, in June 2010, we reported that over half of the 15 DHS programs we reviewed awarded contracts to initiate acquisition activities without component or Department approval of documents essential to planning acquisitions, setting operational requirements, and establishing acquisition program baselines.⁴ We made a number of recommendations to help address these issues as discussed below. DHS has generally agreed with these recommendations and, to varying degrees, has taken actions to address them.

In addition, our past work has found that DHS faces challenges in identifying and meeting program requirements in a number of its programs. For example:

- In July 2011, we reported that TSA revised its explosive detection system (EDS) requirements to better address current threats and plans to implement these requirements in a phased approach. However, we reported that only some of the

¹ See the related products list at the end of this statement.

² Department of Homeland Security *Integrated Strategy for High Risk Management, Implementation and Transformation*, Bi-annual Update to the Government Accountability Office, June 2011.

³ The mission need statement outlines the specific functional capabilities required to accomplish DHS's mission and objectives, along with deficiencies and gaps in these capabilities.

⁴ GAO, *Department of Homeland Security: Assessments of Selected Complex Acquisitions*, GAO-10-588SP (Washington, DC: June 30, 2010).

EDSs in TSA's fleet are configured to detect explosives at the levels established in the 2005 requirements. The remaining EDSs are configured to detect explosives at 1998 levels. When TSA established the 2005 requirements, it did not have a plan with the appropriate time frames needed to deploy EDSs to meet the requirements. To help ensure that EDSs are operating most effectively, we recommended that TSA develop a plan to deploy and operate EDSs to meet the most recent requirements to ensure new and currently deployed EDSs are operated at the levels in established requirements. DHS concurred with our recommendation.⁵

- In September 2010, we reported that the Domestic Nuclear Detection Office (DNDO) was simultaneously engaged in the research and development phase while planning for the acquisition phase of its cargo advanced automated radiography system to detect certain nuclear materials in vehicles and containers at ports.⁶ DNDO pursued the deployment of the cargo advanced automated radiography system without fully understanding the physical requirements of incorporating the system in existing inspection lanes at ports of entry. We reported that this occurred because, during the first year or more of the program, DNDO and CBP had few discussions about operating requirements for primary inspection lanes at ports of entry. DHS spent \$113 million on the program since 2005 and canceled the development phase of the program in 2007.
- In May 2010, we reported that not all of the Secure Border Initiative Network (SBInet) operational requirements that pertain to Block 1 were achievable, verifiable, unambiguous, and complete.⁷ For example, a November 2007 DHS assessment found problems with 19 operational requirements, which form the basis for the lower-level requirements used to design and build the system. As a result, we recommended that the Block 1 requirements, including key performance parameters, be independently validated as complete, verifiable, and affordable and any limitations found in the requirements be addressed. DHS agreed with these recommendations and CBP program officials told us that they recognized the difficulties they experienced with requirements development practices with the SBInet program. In January 2011, the Secretary of Homeland Security announced her decision to end the program as originally conceived because it did not meet cost-effectiveness and viability standards.⁸
- In October 2009, we reported that TSA passenger screening checkpoint technologies were delayed because TSA had not consistently communicated clear requirements for testing the technologies.⁹ We recommended that TSA evaluate whether current passenger screening procedures should be revised to require the use of appropriate screening procedures until TSA determined that existing emerging technologies meet its functional requirements in an operational environment. TSA agreed with this recommendation and reported taking actions to address it.

⁵GAO, *Aviation Security: TSA Has Enhanced Its Explosives Detection Requirements for Checked Baggage, but Additional Screening Actions Are Needed*, GAO-11-740 (Washington, DC: July 11, 2011). An EDS machine uses computed tomography technology to automatically measure the physical characteristics of objects in baggage. The system automatically triggers an alarm when objects that exhibit the physical characteristics of explosives are detected.

⁶GAO, *Combating Nuclear Smuggling: Inadequate Communication and Oversight Hampered DHS Efforts to Develop an Advanced Radiography System to Detect Nuclear Materials*, GAO-10-1041T (Washington, DC: Sept. 15, 2010).

⁷GAO, *Secure Border Initiative: DHS Needs to Reconsider Its Proposed Investment in Key Technology Program*, GAO-10-340 (Washington, DC: May 5, 2010) and *Secure Border Initiative: DHS Needs to Address Testing and Performance Limitations That Place Key Technology Program at Risk*, GAO-10-158 (Washington, DC: Jan. 29, 2010). SBInet Block 1 is a surveillance, command, control, communications, and intelligence system fielded in parts of Arizona that is intended to mitigate or eliminate vulnerabilities along the international border between ports of entry. Block 1 is an element of DHS's Secure Border Initiative, a comprehensive, multiyear plan to secure the borders of the United States and reduce illegal cross border activities such as smuggling of economic migrants, illegal drugs, and people with terrorist intent.

⁸GAO, *Border Security: Preliminary Observations on the Status of Key Southwest Border Technology Programs*, GAO-11-448T (Washington DC: Mar. 15, 2011). After an internal assessment initiated in January 2010, the Secretary of Homeland Security announced in January 2011 that she had directed CBP to end the SBInet program as originally conceived. According to DHS, the Secretary's decision was informed by an independent analysis of cost-effectiveness, a series of operational tests and evaluations, and Border Patrol input.

⁹GAO, *Aviation Security: DHS and TSA Have Researched, Developed, and Begun Deploying Passenger Checkpoint Screening Technologies, but Continue to Face Challenges*, GAO-10-128 (Washington, DC: Oct. 7, 2009).

DHS HAS ENCOUNTERED CHALLENGES IN CONDUCTING AND COMPLETING TESTING AND EVALUATION

Our prior work has also identified that failure to resolve problems discovered during testing can sometimes lead to costly redesign and rework at a later date and that addressing such problems during the testing and evaluation phase before moving to the acquisition phase can help agencies avoid future cost overruns. Specifically:

- In March 2011, we reported that the independent testing and evaluation of SBInet's Block 1 capability to determine its operational effectiveness and suitability was not complete at the time DHS reached its decision regarding the future of SBInet or requested fiscal year 2012 funding to deploy the new Alternative (Southwest) Border Technology.¹⁰ We reported that because the Alternative (Southwest) Border Technology incorporates a mix of technology, including an Integrated Fixed Tower surveillance system similar to that currently used in SBInet, the testing and evaluation could have informed DHS's decision about moving forward with the new technology deployment.
- In September 2010, we reported that S&T's plans for conducting operational testing of container security technologies did not reflect all of the operational scenarios that CBP was considering for implementation.¹¹ We reported that until the container security technologies are tested and evaluated consistent with all of the operational scenarios, S&T cannot provide reasonable assurance that the technologies will function as intended. For example, S&T did not include certain scenarios necessary to test how a cargo container would be transported throughout the maritime supply chain. We recommended that DHS test and evaluate the container security technologies consistent with all the operational scenarios DHS identified for potential implementation. DHS concurred with our recommendation.
- In October 2009, we reported that TSA deployed explosives trace portals, a technology for detecting traces of explosives on passengers at airport checkpoints, even though TSA officials were aware that tests conducted during 2004 and 2005 on earlier models of the portals suggested the portals did not demonstrate reliable performance in an airport environment.¹² TSA also lacked assurance that the portals would meet functional requirements in airports within estimated costs and the machines were more expensive to install and maintain than expected. In June 2006, TSA halted deployment of the explosives trace portals because of performance problems and high installation costs. We recommended that to the extent feasible, TSA ensure that tests are completed before deploying checkpoint screening technologies to airports. DHS concurred with the recommendation and has taken action to address it, such as requiring more-recent technologies to complete both laboratory and operational tests prior to deployment.

DHS HAS NOT CONSISTENTLY INCORPORATED INFORMATION ON COSTS AND BENEFITS IN MAKING ACQUISITION DECISIONS

Our prior work has shown that cost-benefit analyses help Congressional and agency decision-makers assess and prioritize resource investments and consider potentially more cost-effective alternatives and that without this ability, agencies are at risk of experiencing cost overruns, missed deadlines, and performance shortfalls. For example, we have reported that DHS has not consistently included these analyses in its acquisition decisionmaking. Specifically:

- In March 2011, we reported that the decision by the Secretary of Homeland Security to end the SBInet program was informed by, among other things, an independent analysis of cost-effectiveness.¹³ However, it was not clear how DHS used the results to determine the appropriate technology plans and budget decisions, especially since the results of SBInet's operational effectiveness were not complete at the time of the Secretary's decision to end the program. Furthermore, the cost analysis was limited in scope and did not consider all technology solutions because of the need to complete the first phase of the analysis in 6 weeks. It also did not assess the technology approaches based on the incremental effectiveness provided above the baseline technology assets in the geo-

¹⁰ GAO-11-448T.

¹¹ GAO, *Supply Chain Security: DHS Should Test and Evaluate Container Security Technologies Consistent with All Identified Operational Scenarios to Ensure the Technologies Will Function as Intended*, GAO-10-887 (Washington DC: Sept. 29, 2010).

¹² GAO-10-128.

¹³ GAO-11-448T.

graphic areas evaluated. As we reported, for a program of this importance and cost, the process used to assess and select technology needs to be more robust.

- In October 2009, we reported that TSA had not yet completed a cost-benefit analysis to prioritize and fund its technology investments for screening passengers at airport checkpoints.¹⁴ One reason that TSA had difficulty developing a cost-benefit analysis was that it had not yet developed life cycle cost estimates for its various screening technologies. We reported that this information was important because it would help decision-makers determine, given the cost of various technologies, which technology provided the greatest mitigation of risk for the resources that were available. We recommended that TSA develop a cost-benefit analysis. TSA agreed with this recommendation and has completed a life cycle cost estimate and collected information for its checkpoint technologies, but has not yet completed a cost-benefit analysis.
- In June 2009, we reported that DHS's cost analysis of the Advanced Spectroscopic Portal (ASP) program did not provide a sound analytical basis for DHS's decision to deploy the portals.¹⁵ We also reported that an updated cost-benefit analysis might show that DNDO's plan to replace existing equipment with advanced spectroscopic portals was not justified, particularly given the marginal improvement in detection of certain nuclear materials required of advanced spectroscopic portals and the potential to improve the current-generation portal monitors' sensitivity to nuclear materials, most likely at a lower cost.¹⁶ At that time, DNDO officials stated that they planned to update the cost-benefit analysis. After spending more than \$200 million on the program, in February 2010 DHS announced that it was scaling back its plans for development and use of the portals technology.

DHS HAS EFFORTS UNDER WAY TO STRENGTHEN ACQUISITION AND TECHNOLOGY DEVELOPMENT

Since DHS's inception in 2003, we have designated implementing and transforming DHS as high risk because DHS had to transform 22 agencies—several with major management challenges—into one Department. This high-risk area includes challenges in strengthening DHS's management functions, including acquisitions; the impact of those challenges on DHS's mission implementation; and challenges in integrating management functions within and across the Department and its components. Failure to effectively address DHS's management and mission risks could have serious consequences for U.S. National and economic security.¹⁷

In part because of the problems we have highlighted in DHS's acquisition process, implementing and transforming DHS has remained on our high-risk list. DHS currently has several plans and efforts underway to address the high-risk designation as well as the more specific challenges related to acquisition and program implementation that we have previously identified.

In June 2011, DHS reported to us that it is taking steps to strengthen its investment and acquisition management processes across the Department by implementing a decision-making process at critical phases throughout the investment life cycle. For example, DHS reported that it plans to establish a new model for managing Department-wide investments across their life cycles. Under this plan, S&T would be involved in each phase of the investment life cycle and participate in new councils and boards DHS is planning to create to help ensure that test and evaluation methods are appropriately considered as part of DHS's overall research and development investment strategies. In addition, DHS reported that the new councils and boards it is planning to establish to strengthen management of the Department's acquisition and investment review process would be responsible for, among other things, making decisions on research and development initiatives based on factors such as viability and affordability and overseeing key acquisition decisions for major programs using baseline and actual data. According to DHS, S&T will help ensure that new technologies are properly scoped, developed, and tested before being implemented. DHS also reports that it is working with components to improve the quality and accuracy of cost estimates and has increased its staff during fiscal

¹⁴ GAO-10-128.

¹⁵ GAO, *Combating Nuclear Smuggling: Lessons Learned from DHS Testing of Advanced Radiation Detection Portal Monitors*, GAO-09-804T (Washington, DC: June 25, 2009). The ASP program is an effort by DHS to develop, procure, and deploy a successor to existing radiation detection portals. Radiation detection portals, also known as radiation portal monitors, are designed to detect the emission of radiation from objects that pass by them. The current portals are generally deployed at the U.S. land and sea borders by DHS's DNDO and operated by DHS's CBP.

¹⁶ GAO-09-804T.

¹⁷ GAO, *High Risk Series: An Update*, GAO-11-278 (Washington, DC: February 2011).

year 2011 to develop independent cost estimates, a GAO best practice, to ensure the accuracy and credibility of program costs. DHS reports that four cost estimates for level 1 programs have been validated to date.

The actions DHS reports taking or has under way to address the management of its acquisitions and the development of new technologies are positive steps and, if implemented effectively, could help the Department address many of these challenges. However, showing demonstrable progress in implementing these plans is key. In the past, DHS has not effectively implemented its acquisition policies, in part because it lacked the oversight capacity necessary to manage its growing portfolio of major acquisition programs. Since DHS has only recently initiated these actions, it is too early to fully assess their impact on the challenges that we have identified in our past work. Going forward, we believe DHS will need to demonstrate measurable, sustainable progress in effectively implementing these actions.

Chairman McCaul, Ranking Member Keating, and Members of the subcommittee, this concludes my prepared statement. I would be pleased to respond to any questions that you or other Members of the subcommittee may have.

Mr. MCCAUL. Thank you, Mr. Maurer. The Chairman now recognizes the Under Secretary, Mr. Borrás, for his testimony.

**STATEMENT OF RAFAEL BORRAS, UNDER SECRETARY FOR
MANAGEMENT AND CHIEF ACQUISITION OFFICER, U.S. DE-
PARTMENT OF HOMELAND SECURITY**

Mr. BORRAS. Good morning, Mr. Chairman, Ranking Member Keating, Ranking Member Thompson, other distinguished Members of the panel. I am especially pleased to be here and glad to be joined by my esteemed colleague, Dr. Tara O'Toole, Under Secretary for Science and Technology, as well as the acting Inspector General, Mr. Edwards, and Mr. Maurer from the General Accountability Office. I am pleased to discuss the issue of how we acquire and how we manage science and technology at DHS. One of my top priorities since I arrived at DHS has been to improve the efficiency and effectiveness of the acquisition process since it represents approximately \$18 billion of the Department's \$55 billion budgets. Based on our own internal management reviews, as well as IG audits and reviews from GAO, I concluded that the procurement phase of the acquisition cycle, from the receipt of requirements through award of contract, worked fairly well. However, continued attention is needed on the front end requirements development, as well as the back end, our program management phase of the acquisition cycle.

In January 2011, I submitted a copy of a comprehensive plan to GAO and furnished a copy as well to this subcommittee that outlined an integrated strategy for high-risk management. This strategy provides a road map and clear action plans to strengthen Department-wide strategic planning for all of the Department's investments, especially our major acquisition programs. A key tenet of the program is the integrated investment life cycle model which I would be happy to describe in greater detail. But this model defines an end-to-end process to integrate the way we develop and implement strategies, capabilities, and resources. It differs from prior efforts at the Department by providing a repeatable model that will span the entire DHS enterprise. Presently, many operational units plan budgets based on a limited view of their mission need.

Under the integrated model, DHS will focus more attention on the front-end strategic phase, assessing both the capabilities and requirements up-front, thereby providing a broader enterprise-wide

perspective to help ensure investments address the greatest needs of the Department and help leverage success among the various components. The integrated model will enhance our ability to excel in all facets of planning, procuring, and execution of our major programs.

We have also undertaken initiatives to address program execution which will impact the budget, schedule, and performance of existing and future acquisition programs. Of particular importance to me is the acquisition of science and technology products. My partners in science and technology now play a key role in each phase of the acquisition cycle, especially in the earliest phases, concept development through program execution. I expect them to evaluate new and emerging technologies to address capability gaps which will ultimately enhance the Department-wide technology, their expertise and assist the Department in making better technology utilization decisions. Additionally, we have institutionalized the role of science and technology test and evaluation groups in our acquisitions review board process, elevating the role of operational testing to the highest departmental forum on acquisition. Our refinements will also help the Department clearly articulate our long-term strategic acquisition needs, which will improve industry's understanding of our requirements and promote a more competitive marketplace.

I have spent countless hours in meetings with industry, both large and small, listening to their concerns and soliciting their input and ideas. It is my belief that our efforts will ultimately result in a more efficient and innovative solution to help the Department achieve its homeland security mission.

In closing, DHS is working to improve the effectiveness of the acquisition life cycle and to provide better linkage between requirements development, resource allocation, procurement, and program management, with S&T as our full partner. We have come a long way, and we still have more work ahead of us. But we are on the right track to institutionalize a living framework which will enable the Department to become better buyers and deliver our taxpayers a better return on the investments of the resources provided to DHS. Once again, I thank you for the opportunity to appear before this committee, and I look forward to answering your questions.

[The statement of Mr. Borrás follows:]

PREPARED STATEMENT OF RAFAEL BORRAS

JULY 15, 2011

Chairman McCaul, Ranking Member Keating, and other distinguished Members of the committee, I thank you for the opportunity to appear before you today.

Since my appointment, I have led the development and implementation of a comprehensive, strategic management approach focused on maturing organizational effectiveness within DHS. Through this effort, we are focused on enhancing the financial, acquisition, and human capital structures and processes necessary to meet DHS mission goals by integrating and aligning business functional areas at both the Departmental and Component levels. My approach has been built around three key elements:

1. Acquisition Enhancement.—Improving upon the current Department acquisition processes and procedures—addressing the “front end” requirements as well as “back end” program management in order to minimize risk, encourage fiscal responsibility, and improve end-to-end execution across the entire acquisition life cycle.

2. *Financial Enhancement.*—Improving our financial systems and capabilities in both the management directorate and the components, emphasizing strong financial and analytical discipline throughout the Department.

3. *Human Capital Management Enhancement.*—Making sure we have the right people in the right positions at the right time, with the proper workforce balance between DHS and contract staff.

I welcome the opportunity to focus today on the significant acquisition enhancements that are currently underway at the Department.

The successful delivery of major programs is a strategic business function of our Department. Nearly half of the DHS budget is dedicated to obtaining goods and services to support and improve our capabilities, including over \$18 billion in investments in our acquisition programs. Those who directly carry out our mission require and deserve the tools and processes to help address their evolving mission needs effectively and efficiently. With limited resources and increasing demands, we understand that we must excel in all facets of planning, procuring, and managing the execution of our major programs.

The Secretary and Deputy Secretary have asked me to lead our on-going effort to improve the overall acquisition management process, specifically focusing on strengthening the capabilities and requirements development process to better support the Department's strategies and priorities while enhancing program execution. To that end, we have held a series of strategic meetings with the Chief Procurement Officer, Chief Information Officer, Component Acquisition Executives, Heads of Contracting Activity, and other program management professionals to gain valuable insight into the systemic weaknesses that we must overcome in order to deliver programs successfully.

Successful program management requires well-defined requirements based on our priority needs, effective strategies for developing solutions, and efficient processes to operate and maintain solutions. Our review of more than 80 major programs shows that our biggest challenges start with the requirements process and our lack of qualified program management staff.

INTEGRATING REQUIREMENTS AND ACQUISITION PROCESSES

I submitted a report to GAO in January 2011 titled, *Integrated Strategy for High-Risk Management*. In that report, I committed to strengthening the strategic phase of the Integrated Investment Life Cycle Model. In the short time since the report was issued, significant progress has been made to strengthen investment management across the Department.

The Integrated Investment Life Cycle Model (see Figure 1) is an end-to-end process that integrates strategy, resources, and capabilities. It differs from prior efforts in that it is a formal, repeatable model that will span the DHS enterprise. Presently, operational units plan budgets based on a limited view of mission need. Under the integrated model, DHS will mature its "front-end" strategic phase, thereby providing a broader, enterprise-wide perspective and ensuring our investments address the greatest needs of the Department. The Integrated Investment Life Cycle Model will facilitate our ability to excel in all facets of planning, procuring, and managing the execution of our major programs.

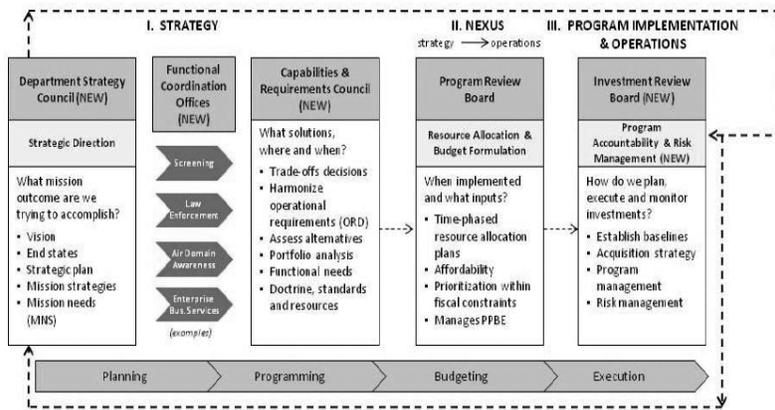


Figure 1: Integrated Investment Life Cycle Model

To date, we have made significant progress towards establishing the Integrated Investment Life Cycle Model by:

- Designing and publishing the Integrated Investment Life Cycle Model (IILCM) in the Integrated Strategy for High-Risk Management (January 2011);
- Identifying five (5) pilot programs to test the IILCM concept;
- Forming an initial set of Functional Coordination Offices (FCOs) to provide analytical support;
- Planning for the first Capabilities and Requirements Council (CRC) to meet in early Quarter 4 of fiscal year 2011 to validate requirements;
- Initiating the development of a Decision Support Tool (DST) to provide enhanced analytic support for major acquisition programs; and
- Continuing the Program Review Board and Acquisition Review Boards (ARB) for providing decisions for on-going investments. Ultimately the ARB will migrate to a new Investment Review Board that has a more holistic reach.

I recognize that effective vendor engagement in the acquisition process is critical to competition, the identification of commercial item solutions, and the realization of savings. However, the speed at which we achieve these objectives must be balanced against the need to abide by statutes, rules, and regulations.

While the Integrated Investment Life Cycle Model is in the initial stages of development, we are confident that it will significantly improve our decision-making processes and are committed to making it successful. The model will result in improved collaboration among our Components, greater efficiencies, and an enhanced ability to ensure our investments are highly responsive to the capability needs of the homeland security enterprise. It will also help the Department clearly articulate our long-term strategic acquisition needs, which will improve industry's understanding of our requirements and promote a more competitive marketplace. This will ultimately result in more efficient and innovative solutions to help the Department achieve its mission.

THE PRE-ACQUISITION PROCESS

There is significant unrealized value in maturing the pre-acquisition process. In the earliest phases of concept development and program initiation, the Department's Science and Technology Directorate (S&T) can help define the appropriate technological solutions and perform feasibility analysis. This can occur while studying the affordability, performance, and viability of various alternatives.

The continuous performance of requirements management is essential throughout the acquisition life-cycle, but is most critical during the earliest planning phase. DHS is strengthening our front-end process by providing greater rigor and oversight of the development of requirements. To that end, we have formally incorporated the role of S&T in the development of all technology requirements for the Department. S&T is in a unique position to evaluate new and emerging technologies against capability gaps, which will increase technological expertise and assist the Department in making better technology "buy" decisions for the DHS Enterprise.

S&T has the statutory authority to serve a significant role in the management of Departmental acquisitions as the Directorate is charged to, “conduct basic and applied research, development, demonstration, testing, and evaluation activities relevant to any or all elements of the Department.”¹ The Homeland Security Act provides sufficient guidance as to “what” S&T should be doing in the management of acquisitions. An enhanced Integrated Investment Life-Cycle Model will better identify “how” S&T will serve a key role in acquisition management.

As Under Secretary O’Toole has noted, “a critical part of successfully transitioning technology is gaining an accurate understanding of the customer needs at the beginning of the project.”² I am pleased that Under Secretary O’Toole has established the Acquisition Support and Operations Analysis Group to leverage technical expertise and assist DHS Components’ efforts. Leading this critical role for S&T is Director Henry Gonzalez, who is responsible for connecting S&T projects to the operational Components, developing the Integrated Product Team process to identify component technology needs, and linking S&T investments to those needs.

The Acquisition Support and Operations Analysis Group will leverage S&T’s critical mass of technical capability and will work in close collaboration with the Management Directorate to:

- Aid the components in developing high-fidelity, testable operational requirements for their acquisitions;
- Aid in executing an analysis of alternatives to ensure that the most appropriate technical approach is taken; and
- Partner with the components throughout an acquisition so that user needs are translated into real capabilities that can be validated upon delivery and deployed without delay.

My colleagues in the S&T will expound upon this effort and how it will guide, support, and strengthen the process.

IMPROVING THE DEFINITION OF REQUIREMENTS

In addition to S&T’s efforts previously mentioned, the Management Directorate is establishing a Center of Excellence for Requirements. The purpose of this Center is to support DHS Component awareness, understanding, and use/adaptation of proven best practices, which will provide DHS program managers with proven tools, processes, and training. The Requirements Center of Excellence will establish a well-defined and repeatable approach to requirement definition to ensure that our process guidance explains the information needed for success. The goal is to support the use of best-in-class requirements management and execution tools, and standardize operating models for how to best use the tools.

The greatest value of this effort will be our ability to link emerging and existing capabilities to operational requirements. A key challenge will be harmonizing requirements across seemingly disparate components and investments.

THE ACQUISITION PROCESS

The Department’s acquisition management framework is growing stronger through the refinement of our policy, processes, procedures, and the placement of people with the right skill sets in the program offices. The goal is for every major program to be implemented in the most responsible and efficient manner possible. Our enterprise-wide acquisition framework is a key element of our integration strategy, and the Department has taken a number of steps to strengthen it.

I have gained valuable insight from conversations I have had with the private sector, specifically those large and small businesses doing work with DHS. The product of those conversations has, in part, helped shape our strategy for maturing our acquisition process, and has resulted in a more constructive dialogue and feedback loop with our private sector partners. It is essential that we maximize our investments in the goods and services we acquire to help us achieve our mission.

DHS has implemented the final version of Acquisition Management Directive 102-01. Directive 102 formalizes the role of the Acquisition Review Board in the oversight and governance process by establishing criteria for reviewing and approving a program’s progress through a standard investment life cycle (See Figure 2). The implementation of this directive has resulted in productive interactions between program offices and Department leadership allowing us to mitigate or avoid unnecessary costs, review schedules, and evaluate performance risks.

¹Homeland Security Act of 2002.

²Testimony of Under Secretary Dr. Tara O’Toole before House Committee on Science, March 15, 2011.

The cornerstone of our acquisition review process is the program baseline. The acquisition program baseline formally documents critical cost, schedule, and performance parameters that must be met to accomplish the program's goals. By tracking and measuring actual program performance against baseline, management is alerted to potential problems and can take corrective action.

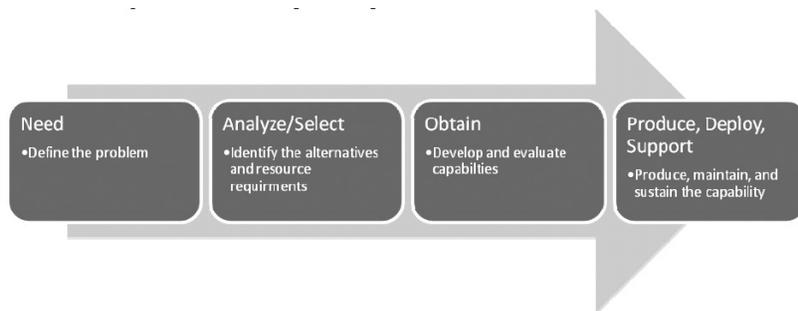


Figure 2: DHS Investment Life Cycle

The Department has provided standardized structure to the Acquisition Review Board presentation materials, focusing on six key areas that all programs must report progress on. These include cost, performance, schedule, risk, funding profile, and staffing. Other challenges that are unique to the program are discussed, but standardizing the opening dialog of the Acquisition Review Board has resulted in better focus on the key issues of program execution.

Additionally, the formalized role of S&T's Testing and Evaluation in the acquisition review process institutionalizes the rigor of proper test procedures and plans in the acquisition process.

Another important step in strengthening acquisition program management is managing risk. We are developing a risk management capability within our decision support tool as well as a standard criterion to evaluate program execution risks. This module will provide for a centralized means to track risks both at the Department and Component level. Acquisition Review Boards, portfolio reviews, and day-to-day oversight all aid in identifying risks faced by programs. As critical risks are identified, steps are taken to place a program on a path to successfully deliver capability to operators.

A central tenet of the Department's management integration strategy is the collection and dissemination of business intelligence and a centralized Decision Support Tool (DST) (See Figure 3). Utilization of these tools will help us better manage the complex relationships between mission objectives, program strategy and performance metrics for a specific program.

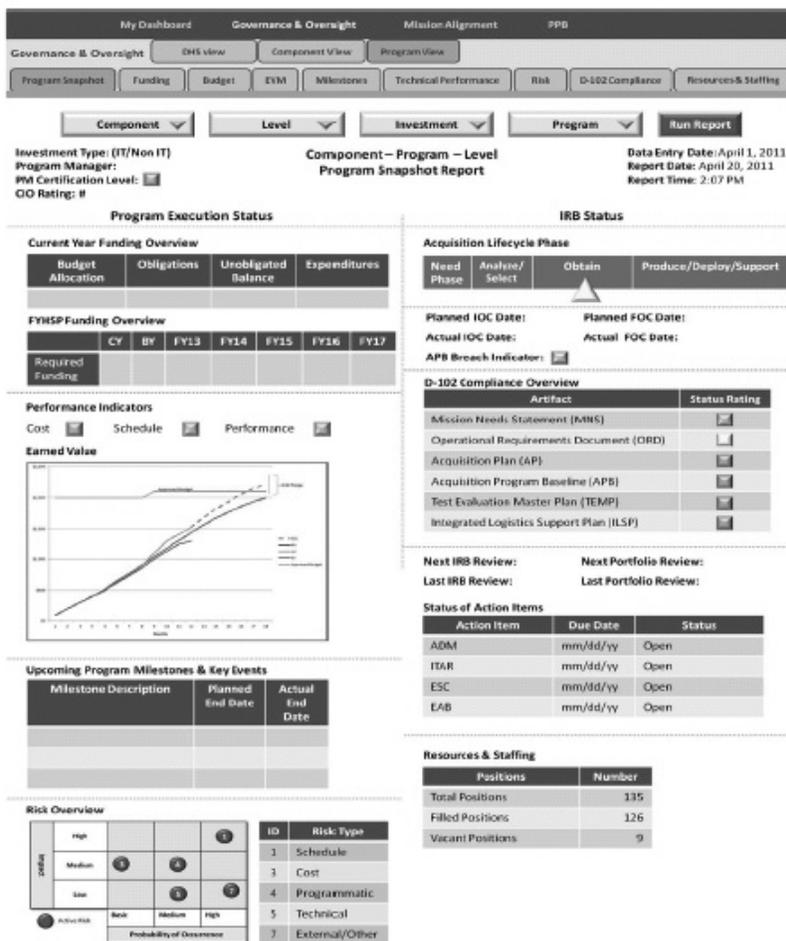


Figure 3: Decision Support Tool

When fully deployed, the Decision Support Tool will be the authoritative source for governance boards on the health of individual programs and help determine “go/no-go” decisions. The goal of a Decision Support Tool is to strengthen accountability for program management and to develop a common language and discipline for all program investments by communicating indicators that inform the health status of programs and provide general performance predictors.

From a strategic level, the Decision Support Tool system will accomplish the following:

- Organize data in a template that guides business owners through a series of uniform questions to assess the risk of an investment,
- Weigh each response with risk-based algorithms scored to determine a program’s risk relative to the Department’s strategic goals and other competing investments,
- Assess the progress of each program during its life cycle on a periodic basis (e.g., quarterly) relative to pre-established measures,
- Provide a series of customizable reports on program status in a dashboard format that is visible to designated officials, according to permission-based roles and responsibilities, and
- Store key data for historical use, record data modifications, and allow users to submit documentation to support ratings.

By combining the strengths and merits of the Integrated Investment Life Cycle Model with a Department-wide Decision Support Tool, we will have the structure, processes, and systems necessary to strategically, effectively, and efficiently manage our mission goals.

CONCLUSION

DHS is working to improve the effectiveness of the acquisition life cycle and provide better linkages between requirements development, resource allocation, procurement and program management. The Integrated Investment Life Cycle Model is a holistic approach to how DHS investments should be managed.

Once again, I thank you for the opportunity to appear before you today, and I look forward to answering your questions.

Mr. McCAUL. Thank you, Mr. Borrás. The Chairman now recognizes Under Secretary O'Toole for her testimony.

STATEMENT OF TARA O'TOOLE, UNDER SECRETARY, SCIENCE AND TECHNOLOGY DIRECTORATE, U.S. DEPARTMENT OF HOMELAND SECURITY

Dr. O'TOOLE. Thank you Mr. Chairman, Ranking Members, distinguished Members of the committee, I will make my remarks very brief so we can get to the questions.

Mr. McCAUL. The Chairman thanks you for that.

Dr. O'TOOLE. Let's see if I can pull it off. The S&T Directorate was created by Congress in 2002 and given very broad responsibilities to conduct and coordinate basic and applied research and development demonstration testing evaluation activities relevant to any or all elements of DHS. In addition to designing and managing new technology for the Department, we are also the core source of technical expertise of engineers and scientists in this highly operational department. Our reach and depth in the technical areas is pertinent to DHS, coupled with our understanding of on-the-ground operational needs in the Department, I think be used to gain significant improvements in DHS' acquisition process. Understand that until very recently, S&T was not regularly or usually involved in acquisition except in the testing and evaluation phase at the back end of the acquisition process. Secretary Borrás and I both required improvements in acquisition as one of our top priorities, and we have formed a strong partnership, not just between the two of us, but between our staffs to institutionalize S&T's roles in the Department's integrated investment life cycle model. In addition, last fall, the S&T directorate realigned our organization and created the office of acquisition support and operational analysis, which will be led by Mr. Henry Gonzalez, a professional who has 27 years of Federal acquisition experience.

This office is designed specifically to assist DHS' components in their efforts to establish clear and testable operational requirements at the very beginning of the acquisition process, which is key to getting what you want years later and at the other end of acquisition when you are ready to put a new technology into the field. As was said by Mr. Maurer, the most established and visible S&T role in acquisition right now is in testing and evaluation. As a member of the DHS acquisition board, our director of operational tests and evaluation provides independent inputs into the Department acquisition decision-making forums. We are currently engaged with 24 programs from across the DHS components that have test planning or execution analysis underway. The testing

and evaluation and standards division in S&T performs oversight of all level 1 and non-delegated level 2 acquisitions in the Department.

The third point I would like to make is that S&T is, indeed, highly focused on leveraging R&D investments made by others, whether they be by the Federal Government or the commercial sector or universities. I would be happy to go into this further. We have to do this, first of all, because of the urgency of the operational needs of DHS which simply can't tolerate the typical 10-year life cycle, the time known to be required to go from a bench research project to deployment in the field. Second, because our budget simply cannot afford to be a soup to nuts, R&D generator. We have to leverage investments made by the commercial sector and others, and we have made many moves to make that a more disciplined and universal activity within S&T, which I would be happy to describe.

We have extensive interactions with DOD and other Federal agencies to make sure we know what they are doing and can garner their technologies as they apply to us. Under Secretary Borrás and I meet quarterly with Ash Carter in DOD for the purpose of reviewing what technologies they have that might be relevant to DHS.

I will say two things often make it difficult to translate DOD technologies into DHS operations. One is cost, and second is the amount of training required for the technology. But we do make use of their technologies in many instances, and I would be happy to talk about that in detail. Finally, I am compelled to note that the extensive technical expertise and the unique understanding of DHS operations which S&T embodies, I think, can be powerfully leveraged against our acquisition needs.

Mr. McCAUL. Dr. O'Toole, I hate to interrupt you. We have been called to vote. We have about 10 minutes before we have to get to the floor. If you could maybe wrap up your testimony.

Dr. O'TOOLE. Okay. One sentence. It all goes away with the House budget. Thank you, Mr. Chairman.

[The information follows:]

PREPARED STATEMENT OF HENRY I. GONZALEZ ON BEHALF OF THE SCIENCE AND TECHNOLOGY DIRECTORATE

JULY 15, 2011

INTRODUCTION

Good morning, Chairman McCaul, Ranking Member Keating, and distinguished Members of the subcommittee. I am honored to appear before you today on behalf of the Department of Homeland Security's (DHS) Science and Technology Directorate (S&T) and Under Secretary Tara O'Toole. My testimony will focus on the Directorate's role in the Department's requirements gathering and acquisition management processes, and how these processes leverage existing technology across the DHS Components and the rest of the Federal Government including the Department of Defense.

On March 15 of this year, Under Secretary O'Toole appeared before the House Committee on Science, Space, and Technology, Subcommittee on Technology and Innovation to describe the results of an extensive S&T strategic planning process, which are captured in five strategic goals and reflected in an organizational realignment which took effect last November. Those five strategic goals are:

- Goal No. 1.—Rapidly develop and deliver knowledge, analyses, and innovative solutions that advance the mission of the Department;
- Goal No. 2.—Leverage technical expertise to assist DHS Components' efforts to establish operational requirements and select and acquire needed technologies;

- Goal No. 3.—Strengthen the Homeland Security Enterprise and First Responders’ capabilities to protect the homeland and respond to disasters;
- Goal No. 4.—Conduct, catalyze, and survey scientific discoveries and inventions relevant to existing and emerging homeland security challenges; and
- Goal No. 5.—Foster a culture of innovation and learning in S&T and across DHS that addresses challenges with scientific, analytic, and technical rigor.

In support of goal No. 2, the realignment established the Acquisition Support and Operations Analysis Group (ASOA), bringing together all of S&T’s requirements and acquisition related activities under one Director who reports directly to the Under Secretary. ASOA is able to leverage S&T’s knowledge, expertise, and other technical resources across DHS and work closely with the Under Secretary for Management to improve the requirements gathering process and acquisition support to the components. As the Director of ASOA, I am also S&T’s Component Acquisition Executive. This provides me with the ability to participate in the Acquisition Review Boards of other Component programs and represent S&T at these critical decision-making forums.

S&T WILL BE A KEY PLAYER IN THE DEPARTMENT’S NEW REQUIREMENTS PROCESS

Decades of Federal acquisition management shows that a thorough and comprehensive requirements process is indispensable to the effective and efficient delivery of operational benefits to end users. Before significant investment in pursuing a solution, one needs to invest time and effort to thoroughly understand the problem and develop detailed requirements. When this doesn’t happen, the Government may end up with solutions that do not meet actual needs, costing more in the long run.

To maximize the Department’s resources, it is critical to have an enterprise-level requirements process to provide a top-down framework where the most pressing needs can be identified and prioritized. Through the leadership of Under Secretary Borras, the Department is implementing its Integrated Investment Life Cycle (IILC) Model which provides the enterprise-level requirements setting process.

The IILC includes two key groups: The Department Strategy Council and the Strategic Requirements Council. The Department Strategy Council brings together components to set strategic, high-level requirements. These strategic requirements must then be refined to operational concepts that can be implemented.

The Strategic Requirements Council (SRC) makes trade-off decisions between potential solutions. While requirements are being set and alternatives are being analyzed, it is critical that technologists work closely with operators to come up with viable solutions. In some cases, the desired technology may be beyond the state-of-the-art. In those cases, S&T may take the project on as a research and development effort, and the SRC can elect a more feasible option or opt to hold off the acquisition. In other cases, there may be more appropriate technologies than initially proposed.

By being involved across the Department’s IILC, S&T will be able to assist in developing technically specific and feasible requirements, setting the stage for acquisitions that are completed on schedule and within budget. Moving S&T into a stronger support role for this “front end” of acquisition has been a priority for both Under Secretary O’Toole and Secretary Napolitano. We look forward to S&T’s active engagement in the Capabilities and Requirements Council and other forums of the Model.

S&T HAS ON-GOING EFFORTS ACROSS THE ACQUISITION LIFE CYCLE

S&T Provides Support for Requirements Development

S&T currently assists Components with requirements analysis. The first way we have been doing this is through the sponsorship and management of the Department’s two Federally-funded research and development centers: The Homeland Security Studies and Analysis Institute (HSSAI) and the Systems Engineering and Development Institute (SEDI). These two world-class organizations provide requirements analysis support to every DHS Component. For example, between April 2010 and May 2011, HSSAI issued nearly 50 analytic reports developed for four operational Components and three headquarters Components, and is currently engaged in four Analyses of Alternatives for three operational Components. Similarly, SEDI is providing support to 13 major acquisition programs¹ at five operational and three headquarters Components.

The second way S&T assists in the requirements process is by working with Components to define S&T research and development projects. Over the last few years

¹ The Department defines “major acquisition programs” to include “Level 1” and “Level 2” programs. Level 1 and Level 2 programs are those with over \$1 billion and \$500 million life cycle costs respectively.

this process has functioned through the Capstone Integrated Product Teams (IPT) process. A refocused approach to the IPTs will establish Science and Technology Investment Councils (STIC), which elevate participation to the most senior levels of our Directorate and of each Component. The goal of these STICs is to engage S&T and the Components in a systematic manner regarding their critical operational needs, through the creation of new S&T-funded projects or by modifying existing projects that will address critical needs and underlying technology gaps. The Under Secretary for Science and Technology and Component heads will co-chair the STICs and agree on their key outputs, namely, approved requirements and corresponding research and development projects. The STIC process is being developed over the summer and we will have several of the Component STICs in place by the end of fall.

Finally, we provide Components with requirements development support at their request. Two specific examples are the Science and Technology Operational Research and Enhancement (STORE) project and the Tactical Communications (TACCOM) program. STORE, which is a high-visibility "Apex" project,² is conducting detailed operations research, evaluating alternative enhanced solutions against dynamic threats and fielding actual prototype capabilities for the U.S. Secret Service. In the TACCOM program, we are managing a Technology Demonstration activity for DHS's U.S. Customs and Border Protection (CBP) that will feed real-world data on technology capabilities into an analysis of alternatives.

S&T Provides Support to Components During Acquisitions

S&T performs a variety of roles in the Department's acquisition process. First and most visibly is our statutory Department-wide role in test and evaluation.

Just as a thorough and comprehensive requirements process is indispensable to the effective and efficient delivery of operational benefits to end users, so is a thorough and comprehensive test and evaluation process. Testing and evaluation, although present throughout the entire life-cycle of an acquisition, is most critical on the "back end." It is the final step before the Department makes significant investment into final production and fielding of the acquired system, and ensures that the system meets its documented operational requirements and provides the required capability. As a member of the DHS Acquisition Review Board, S&T's Director of Operational Test and Evaluation provides independent inputs into the Department's acquisition decision-making forums.

S&T's Test and Evaluation organization is currently engaged with 24 programs from across the DHS Components that have Test and Evaluation activities underway. This includes development and operational testing and program test and evaluation plans. S&T has assessed six Component Operational Test and Evaluation activities in the past 12 months that are at the final stage of acquisition, and is currently involved in three others. S&T's role also includes serving as the Department lead for all Test and Evaluation policies and establishing a career ladder program for Test and Evaluation professionals.

Standards also play an important support role in acquisitions. Providing standards that can be used by multiple technology vendors to develop solutions drives market competition, resulting in improved products at lower costs to the Federal Government, first responders, and other Homeland Security Enterprise owners and operators. The Standards branch is currently engaged in three efforts that support acquisitions including biodetection and radiation/nuclear detection.

S&T also provides acquisition program management expertise to Components at their request. This is a new function, and we will be expanding our capacity in the months ahead. Currently we are supporting CBP on their Automated Commercial Environment (ACE) program where we have dedicated a senior systems engineer. Working with the ACE program office, our engineer is developing a revised system architecture and providing best-practices software development guidance.

S&T LEVERAGES EXISTING TECHNOLOGY CAPABILITIES FROM ACROSS THE UNITED STATES AND INTERAGENCY PARTNERS

To ensure that S&T and DHS are leveraging research and development from other organizations, S&T created the Research and Development Partnerships group as part of its reorganization. The director of this group also reports directly

²To meet Components strategic needs, and to provide Component leaders with an understanding of S&T capabilities, we have instituted "Apex Projects". Apex Projects must solve a problem of high-level operational importance. Best practices learned in these projects will be documented and infused through the rest of our activities. In addition to the USSS project described, S&T has initiated an Apex project with Customs and Border Protection to develop a secure transit corridor for goods between Mexico, the United States, and Canada.

to the Under Secretary, and manages offices within S&T that reach outside of DHS and oversee a number of joint projects and interagency processes to maximize the Federal Government's work, along with the work of our international, private sector, and university partners.

In addition to these programs, S&T works closely with the Department of Defense (DOD) and the Department of Energy (DOE) on a number of partnerships and participates in the Committee on Homeland and National Security run by the White House Office of Science and Technology Policy. This group and its subcommittees develop interagency Research and Development strategies that ensure all organizations across the Federal Government are utilizing each other's technology efforts.

While S&T always does a "horizon scan" before starting a new project, including evaluating DOD efforts, it is rare that DOD and DHS mission needs, operating environments, and budget constraints line up exactly together. For example, both organizations are concerned about Improvised Explosive Devices (IED). However, the IED problem in Afghanistan requires very different solutions than those in the United States. To continue the example, front-line law enforcement in the United States cannot use wireless jammers in the middle of a city as DOD has done in Afghanistan. On the other hand, we may be able to collaborate on updated handheld devices that detect homemade explosives.

CONCLUSION

DHS is the third-largest Federal agency with an extremely diverse operational portfolio. It is vital that the Department builds and maintains a comprehensive requirements and acquisition process with proper due diligence and strategic execution. At the same time, our requirements and acquisition process must be flexible and adaptable to constantly changing threats and operational needs.

One of the keys to the Department's path forward is through a stronger integration of S&T into the requirements and acquisition processes. The continued implementation of Under Secretary O'Toole's strategic goals and demonstrated partnership with DHS's Under Secretary for Management shows a clear path of transformation and progress.

Thank you for inviting me to appear before you today. I look forward to answering your questions and to working with you on S&T's requirements gathering and acquisition management processes.

Mr. McCAUL. The Chairman now recognizes himself for 5 minutes. As I mentioned in my testimony, just, I think very disturbingly yesterday, *The Washington Post* reported that DHS plans to spend millions on troubled radiation detectors, and I want to focus on that if I can. It basically says the Department of Homeland Security plans to spend more than \$300 million over the next 4 years on radiation detection equipment that has not been fully tested and may not work. This is according to the budget request and report by the Government Accountability Office. That is very concerning to me. We are talking about detecting radiation. This is nuclear threats against the United States in its homeland, dirty bombs perhaps in the homeland. Mr. Maurer and Mr. Edwards, can you tell me, particularly Mr. Maurer at GAO, tell me what the concern was with this finding?

Mr. MAURER. Mr. Chairman, we have done a lot of work over the past several years looking at the ASP program. It has been trouble from pretty much Day 1. There are a number of concerns about the program's inability to clearly meet requirements, come up with a clear cost estimate, have good time frames for how long it's going to take before it is finally deployed. It is also not clear whether the new technology is actually better than existing technology that's already deployed on the borders.

Some of our prior works also highlighted problems with the testing that has been done so far with the program, as well as coordination between DNDO and CBP, the offices within DHS that are actually developing the technology and the actual end user of the

technology. So the bottom is it has been a sick program from Day 1.

Mr. MCCAUL. Mr. Edwards, very succinctly.

Mr. EDWARDS. We haven't looked at it because GAO was looking at it. I concur with my colleague from GAO. We plan on looking at this in our fiscal year 2012 plan.

Mr. MCCAUL. Dr. O'Toole, I want to give you a chance to respond to this allegation in *The Washington Post* that these systems may not work and that we are spending millions of dollars on that. Can you respond?

Dr. O'TOOLE. Thank you, Mr. Chairman. Yes. This is not a program run by S&T. This is a DNDO program, but I appreciate the opportunity. One, *The Washington Post* article is very misleading. There has been lots of testing of the ASP, as GAO suggests. What hasn't been done is operational testing which is the very last stage before you actually go in for a procurement and try and buy something. The reason there hasn't been operational testing even scheduled was because we don't think we are going to procure this. The ASP program is one of these technologies where we are pushing the envelope of physics, so it hasn't worked as well as we had hoped.

That is true. I take no issue with what GAO just said. But we are buying a few of these machines to put in the field to try and understand why they don't work and if they might be incrementally improved. Understand, the problem now is that we are getting as many as 300 hits in a single port per day on containers that look like they might have radioactive material in them. Right now, our only option is to unpack each container or go around it with a hand-held device—these are big containers about the size of the curtain behind you—and try and see if we can detect radioactive materials, which we think is an unsatisfactory set of options. So ASP—

Mr. MCCAUL. Again, I have to move quickly because of votes on the floor. But thank you for your testimony. Let me just bring up another point. Mr. Maurer, you mentioned TSA lacks an overall plan and they have spent, it is \$8 billion that we are looking at. Can you explain what you mean by they lack an overall plan?

Mr. MAURER. Sure. Right now TSA has explosive detection technology deployed at airports that meet two standards. Some meet standards that were set in 1998. Others meet standards that were set in 2005. Their long-term plan is to meet more stringent standards that were set just last year. The work that we conducted found that there is no overall strategic plan at TSA to determine how long it is going to take to roll out the new technology, in other words, update existing systems as well as procure new systems that can meet the requirements that were set last year.

Mr. MCCAUL. That is something I look forward to working with you on in the future as well. Let me just conclude by saying that I have had numerous, in the private sector, numerous companies come to me and say they just can't get access to the Department of Homeland Security. They can't get a meeting to talk about their technologies. One company in particular, you know, does holographic maps for the troops in Afghanistan, has contracts with the DOD, proven technology. Border Patrol likes these maps. They have seen them. They have requested the Department look at these

maps. Yet they can't get a meeting with the Department of Homeland Security. I have sent three letters asking for this meeting over the last several months, and I have not had a response. I would hope that the Department would be a little more responsive, not only to me, but more importantly, to the private sector in looking at new technologies that could make a difference. With that, I recognize the Ranking Member.

Mr. KEATING. Thank you, Mr. Chairman. I would just like to follow up because I am concerned in this respect. It sounds like implementing an integrated investment lifestyle model and putting an emphasis on the front end and the back end seems like a better approach than has been implemented. Now, my concern is this: The House-passed budget slashed in half S&T's money and took a huge cut out of management. Sometimes when you are trying to cut money, you can cost more in the long run. I want to ask you, on two sides, No. 1, internally on the management side, how—and anyone can comment on this, how that would compromise, that level of cut would compromise your ability to do the management changes that you talked about that are necessary. No. 2, and importantly so, and I think it dovetails to what the Chairman said, with these cuts and the inability to, I think, initiate some of those things, how can the private sector companies work successfully with you? Is that going to be compromised by these cuts as well? Anyone can jump in.

Mr. BORRAS. I will be happy to respond to that. Mr. Keating, the proposed cuts would have a significant, if not drastic impact on the management directorate's ability to do its job, particularly in acquisition. The planned reduction of an approximately 70 percent could result, if enacted, approximately half of the staff that currently now sits in the management directorate having to be laid off. So it has a tremendous impact on resources. It has an impact on our ability to redirect our resources to areas that are in harmony with the direction that we are taking.

For example, we have proposed a very comprehensive strategic plan, specifically around 150 positions where we need to strengthen the acquisition work force. These are program managers, these are cost estimators. These are schedulers. It is a modest \$24 million expense and that alone is a significant blow to our ability to improve the ability to be able to provide good cost, up-front cost estimating, to be able to better plan and understand the life cycle cost of these programs. Plus, all of the additional oversight that we have in place would be severely jeopardized.

Mr. KEATING. Dr. O'Toole, you've been asked to do more under the revisions that Mr. Borrás has talked about. How can you do that? What, and if I get a chance, with the roll call running up, I am going to ask each of you could this kind of cut actually cost more money in trying to improve the acquisition process.

Dr. O'TOOLE. Yes, I think it certainly will, particularly over a period of 2 to 5 to 10 years. The cut in S&T is very dire. It is actually 80 percent of our R&D budget once we get finished keeping the lights on at the laboratories and other mandated activities, for example. We would spend what was left on the R&D budget basically shutting down test beds that we have already invested money in. When you make the budget for R&D go up and down, you lose all

of your sunk costs, because R&D projects generally play out over a number of years.

So it not only will cost money in the future, but wastes money already invested. It will also basically freeze DHS capabilities in place because we will not be developing new technology, either internally or with the commercial sector. Happy to work with you, Mr. Chairman, in getting you a response to your letter. Although I will say we are a lot smaller than the commercial sector and they think we are a lot bigger than we actually are so they get frustrated, not just with the plug in, which I think we have tried to make much more user friendly, but we just don't have the resources to pursue every good idea. If this budget goes through, or anything close to the House mark, we will stop doing R&D and most of our very good people will find other employment. These are the folks in this economy who actually have job options. These are really good engineers and scientists and they want to do R&D. If I tell them they are not doing R&D, they are not there to work on acquisition.

Mr. KEATING. Thank you. I am noticing we have 1 minute and 11 seconds to get to the building. So thank you.

Mr. MCCAUL. We are going to have to run very fast. But I want to thank the witnesses for your valuable testimony. I think we have an hour and a half worth of votes, so we are going to stand in recess. I am going to go ahead and dismiss this panel. We will come back in an hour and a half with the second panel. If any other Members have questions they will submit them for the record. I would ask that you respond. Thank you so much.

[Recess.]

Mr. MCCAUL. The committee will come to order. I understand we had a conversation on the Red Sox that delayed the beginning of this hearing. I want to thank the witnesses for your patience. I know it was a long series of votes, but we look forward to hearing your testimony. I am sorry that we lost our audience, but this will be a part of the record forever. Thanks again for being here.

I want to introduce first Jim Williams, who serves as a Vice Chair for TechAmerica's Homeland Security Committee, and is also the Senior Vice President of Global Professional Services. Previously Mr. Williams spent over 30 years working in the Federal Government retiring as the Commissioner of General Services Administration Federal Acquisition Service. That is quite a mouthful. Mr. Williams is also the Director of the U.S. Visitor and Immigrant Status Indicator Technology Program, otherwise known as U.S. VISIT at the Department of Homeland Security.

Thank you so much for being here.

Marc Pearl has served as President and CEO of the Homeland Security and Defense Business Council since March 2008. Prior to joining the council, Marc was a Principal and Chairman of IT Policy Solutions, which he founded to counsel private sector organizations in meeting their public policy challenges. He also served as a Chief of Staff and Legislative Counsel to U.S. Representative Dan Glickman.

Finally, Scott Amey began working at the Project for Government Oversight in the mid-1990s as a research assistant and returned to the organization in 2003 to direct its contract oversight

investigations. His work includes reviews of Federal spending on goods and services, the responsibility of the top Federal contractors and conflicts of interest and ethics concerns. He previously clerked for the Honorable James Kenney, III at the Court of Special Appeals in Maryland.

The Chairman now recognizes Mr. Williams for his testimony.

STATEMENT OF JAMES A. WILLIAMS, VICE CHAIR, HOMELAND SECURITY COMMITTEE, TECHAMERICA

Mr. WILLIAMS. Thank you Chairman McCaul and Ranking Member Keating. Thank you for providing TechAmerica the opportunity to present the tech industry's views on integrating emerging technologies and the contracting process at the Department of Homeland Security. Thank you for including my written statement as part of the record.

TechAmerica represents approximately 1,000 member companies of all sizes from the public and commercial sectors of the economy and is the industry's largest advocacy organization, and our member companies provide the bulk of contract services at DHS. TechAmerica believes the Department can improve their process and better meet their mission. The challenges the Department faces are not wholly related to staffing or funding. It is our belief that this is primarily a communications challenge. We believe these recommendations will provide benefits to DHS that can also help DHS's partners in the homeland security mission at the State, local, Tribal, international, and private sector levels.

DHS would benefit from increased and on-going industry engagement throughout the acquisition process because early and frequent dialogue serves to introduce new cost-effective capabilities and technologies to the Government and can be critical to a mission's success.

First, TechAmerica fully endorses the OFPP Myth-Busting memorandum on open communications issued as part of the 25-Point Plan. The 25-Point Plan also established a requirement to submit a draft vendor communications plan by June 30 to OMB for review. TechAmerica with its member companies that do business with public sectors around the world would be glad to offer best practices suggestions on DHS's draft plan.

Second, RFIs and Industry Days provide important opportunities for industry to understand DHS's needs and new initiatives and allow industry to research the market for technological or services solutions and team with small businesses early in the process. More use of Industry Days with as much detail as possible about mission goals and requirements done early in the process will also allow for better one-on-one discussions with better qualified potential bidders.

Another important area for successful program implementation is end-user involvement in the acquisition process. A system that is planned, designed, acquired, tested, and implemented without continued engagement with the end users provides too many opportunities for surprise, disappointment, and failure. Government can do a better job of developing requirements and linking them back to Government processes and mission goals.

TechAmerica believes it is important to engage industry in proactive and collaborative ways throughout the requirements development process. Trade associations like TechAmerica are beneficial sounding boards and should be used more, yet it has become more difficult to get approval from the Department for key senior representatives to participate in industry dialogues with TechAmerica or of this sort.

TechAmerica does support the efforts of the DHS Chief Procurement Officer, Dr. Nick Nayak under the leadership of Under Secretary Rafael Borrás to implement these communications improvements. But both Government and industry must come together with knowledge of each party's needs and processes. To develop and improve this understanding, we encourage DHS to create a program manager track that allows the education of acquisition personnel and decision-makers of the common challenges and issues regarding Government contracting.

DHS should use senior-level speakers from TechAmerica, as the Department of Defense has done so in their senior-level classes over the past 20 years. The use of down select speeds the acquisition process, results in a smaller number and higher quality proposals in the end, encourages competition and teaming and provides for lower risk when used with fly-before-you-buy testing on multiple solutions.

Using pilot programs more will also, when done properly, allow the opportunity to test new processes and solutions, attract non-traditional suppliers, better understand program costs and speed delivery of needed solutions in the face of critical and evolving threats. The key to increase use of pilot programs is Departmental leadership and support.

Finally, DHS must commit to an effective safety act implementation by improved integration with homeland security, technology acquisition practices, including expediting technical evaluations of safety act applications relating to products and services procured by DHS and other Federal Government entities.

In conclusion, the challenges we face in leveraging emerging technologies is a question of process, not of people. The people at DHS are doing great work and service to our country and industry has many people that share that mission.

Thank you for allowing TechAmerica to present its views.

[The statement of Mr. Williams follows:]

PREPARED STATEMENT OF JAMES A. WILLIAMS

JULY 15, 2011

Good morning, Chairman McCaul, Ranking Member Keating, and Members of the subcommittee. My name is Jim Williams, and I am Vice Chair of TechAmerica's Homeland Security Committee. Thank you for providing TechAmerica the opportunity to present the technology industry's views on the contracting process at the Department of Homeland Security (DHS) and the opportunities to leverage emerging technologies. Technology and the services TechAmerica's companies offer play a critical role in all aspects of the DHS mission. From the detection and prevention of terrorism, protection of America's borders and interior, providing resiliency after disasters, to ensuring integrity in our immigration laws, TechAmerica's companies are focused on being part of the solution. As the threats continue to evolve, it is vital that the more than 230,000 employees of DHS have the modern technological tools and the best procurement methods to face these challenges.

The role of DHS at the top of the homeland security pyramid is also critical to the homeland security needs of State, local, Tribal, private sector, and international partners. Improvements in DHS's capabilities can be used by these other partners as part of a layered strategy for meeting the homeland security mission. The more DHS combines its acquisition buying power with that of their partners, the more precious dollars are leveraged to provide greater mission accomplishment. Thus, any improvements to the acquisition of better technologies and methods within DHS can have far-reaching positive impacts.

TechAmerica is the leading voice for the U.S. technology industry, which is the driving force behind productivity, growth, and jobs creation in the United States and the foundation of the global innovation economy. Representing approximately 1,000 member companies of all sizes from the public and commercial sectors of the economy, it is the industry's largest advocacy organization. TechAmerica member companies provide the bulk of contracted-out services at DHS. The Association is also the technology industry's only grassroots-to-global advocacy network, with offices in State capitals around the United States and in Washington, DC, Europe (Brussels), and Asia (Beijing). TechAmerica was formed by the merger of AeA (formerly the American Electronics Association), the Cyber Security Industry Alliance (CSIA), the Information Technology Association of America (ITAA) and the Government Electronics & Information Technology Association (GEITA).

TechAmerica's extensive track record of addressing issues related to Government contracting and procurement is well known, and we continue to maintain a healthy program specifically focused on this important area. Our Homeland Security Committee meets monthly to discuss developments in this space, and senior executives from the Government are always featured as our guest speakers. We are also highly active within the National Defense University and Defense Acquisition University systems where executives from our member companies are invited to provide presentations on the industry perspective of the Government contracting process. TechAmerica has conducted this program for the better part of 20 years, and we believe the frank and open dialogue that takes place at these sessions is one factor that has led to improved procurements across the Federal Government.

Today's hearing provides for an important moment to examine and reflect on the current contracting process at DHS and an opportunity to investigate new methods and modifications to that process to speed the adoption of technologies critical to the advancement of the Department's mission. TechAmerica and its member companies look forward to further discussions about how to best advance the Government contracting and procurement process and the issues I will outline today.

DIFFICULTY OF THE DHS MISSION

The mission DHS is charged with is broad in scope, to secure and protect the American people across nearly 7,000 miles of land border and along 95,000 miles of maritime border. We have great respect for the work that all DHS employees do every day on behalf of our Nation. In the early years of the Department, focus was largely directed to physical threats. However, in the 10 years since 9/11, the preponderance and sophistication of cyber attacks on the homeland has stretched the Department's resources and threat environment. America's enemies are evolving and quickly adopting new technologies with increased coordination and sophistication. We believe it is critical then that the methods and technologies we utilize to face these threats keep pace or surpass those of our adversaries.

Today DHS receives approximately 700 proposals annually in response to requests for new technology or technology services. TechAmerica believes there are a number of ways that the agency can improve the process and better meet their mission. This is not wholly a staffing or funding problem; it is our belief that this is ultimately a communication challenge. The communications challenges occur between the private sector and the Department and internally within DHS. From our perspective, it appears that too frequently DHS components do not know what the larger Department is doing, which leads to redundant efforts, slows the pace of technology adoption, and can be wasteful of precious funding.

INDUSTRY ENGAGEMENT

TechAmerica fully endorses the OFPP Memorandum dated February 2, 2011, titled, "Myth-Busting: Memo to Agency Chief Information Officers and Chief Acquisition Officers," regarding the benefits of more open communications with the private sector. Enhanced engagement was one of the five key elements of OMB's 25-Point Plan to Reform Information Technology Acquisition and Management. TechAmerica

Foundation, in its GTO–21 Commission Report,¹ called for enhanced internal and external engagement. This call laid the foundation for the 25-Point Plan, of which more engagement and communication was an essential tenet.

DHS must be more engaged with industry, especially at the earliest stages of the procurement process. This must be an on-going conversation where both sides share their needs and constraints and work together to identify technological solutions. Early and on-going dialogue serves to introduce new capabilities and technologies to the Government buyer and is critical to mission success.

Requests for Information (RFIs), provide an important opportunity for industry to understand the needs of the agency, begin to research the market for technological and/or services solutions to the challenge and prepare internally as a potential bidder. Industry days can provide important opportunities for the Government to share some substance of new initiative. It is important, however, that industry day events not only provide as much detail as possible about requirements, but also be timed far enough in advance so that Government and industry can follow-up in one-on-one discussions to take what is learned at the event and develop it into a successful acquisition strategy.

Industry plays a crucial partnership role with DHS in support of their mission. The technology sector represents thousands of citizens who take pride in their work and the safety that the technologies they build and deploy can provide to all Americans. The more industry and Government can work together as informed partners, the better the results will be for all. It should be a goal of the contracting process to match the needs of particular DHS mission requirements with the best value solutions and services that technology companies can offer to meet these needs in the most effective and efficient manner.

Another opportunity for engagement with industry is with trade associations like TechAmerica. We meet monthly in an effort to hear from senior DHS representatives to discuss how industry can best address the ever-changing challenges in providing the technologies necessary for carrying out the mission of DHS. But, it has become increasingly difficult to get approval from the Department for key senior representatives to participate in industry dialogue of this sort. TechAmerica believes these conversations inform the decision-making process not only of industry as we work to align our resources, but also informs Government of the constraints of industry. DHS should not be constrained from this important line of communication.

The “25-Point Plan” established a requirement to submit a draft Vendor Communications Plan by June 30, 2011 for OMB Review. Hopefully, this practice will help spread best practices across all departments and agencies. TechAmerica, with its member companies that do business with public sectors around the world, would be glad to offer best practices suggestions on DHS or any agency’s draft plans. Finally, on the engagement and procurement fronts, TechAmerica is very supportive of the efforts of the DHS Chief Procurement Officer, Dr. Nick Nayak. His efforts, under the leadership of Under Secretary Rafael Borrás, are committed to helping the Department build the best possible procurement practices into its operational structure. Under this effort the Department has held quarterly meetings with the Top 25 contractors to the Department. However, these meetings could have more impact if the group was expanded to include contractors not in the Top 25.

END-USER INVOLVEMENT

A successful program implementation must incorporate end-users in the acquisition process. A system that is planned, designed, acquired, tested, and implemented without on-going engagement with the end-users provides for too many opportunities for surprise, disappointment, and failure. Cognizance of internal processes and staff practices must be accounted for early in the requirements process. Bringing together end-users, program managers, acquisition professionals, and industry in face-to-face settings, will afford the opportunity to match the true needs or goals of the Department with what is available from industry. This type of planning and engagement with the end-user can shorten acquisition times and can improve the synchronization of agency needs with industry solutions. This recommendation for the Department is applicable to the requirements development process, but is equally appropriate for all parts of an eventual procurement request, including the proposal instructions, evaluation criteria, and terms and conditions negotiations.

Moreover, providing timely and valuable communications with industry throughout the acquisition process in terms of answers to industry questions, as soon as possible, and understanding the status of acquisitions will benefit all parties.

¹ TechAmerica Foundation, *Government in Technology Opportunity in the 21st Century (GTO–21)* (2010), http://www.techamerica.org/Docs/GTO_21.pdf.

BUILDING THE ACQUISITION WORKFORCE

To improve the contracting process, both industry and Government must understand each party's needs and background.² To develop and improve this understanding we encourage DHS to create a program manager career track to educate decision makers of the common challenges and issues regarding Government contracting.

For the last 20 years, TechAmerica has provided senior executive level speakers to present an industry perspective of procurement at Defense Acquisition University and National Defense University classes throughout the country. The presentation provides students with the industry perspective of the contracting process and how each step of the process affects a corporate actor's culture and workflow. Specifically, students get detail on how industry must create a business case and what influences whether a company bids on a specific program or not, and how we forecast the allocation of our resources to ready implementation. Further, it is an opportunity for our speakers to learn more about Government structure and the decision-making process. We recommend that DHS incorporate a similar curriculum element in its acquisition training requirements to provide program managers with an opportunity to learn more about the industry decision-making perspective.

CONTRACTS MANAGEMENT AND COORDINATION

DHS would benefit from a streamlined contracts management process and better coordination across divisions. There are opportunities for DHS to increase their efficiencies in the contracting process including increased use of "down select" contract selection, better timing of requests for information and better use of existing past-performance databases to aid the selection process for DHS.

Increased Use of "Down Select"

The use of "down select" speeds the process of procurement, lowers the cost to industry of participating in the proposal process and encourages competition and teaming. As a key part of the acquisition strategy, the Department recently conducted procurements where an initial review of qualifications and proposals from vendors allowed them to "down select" to a smaller pool of qualified competitors. The most recent example of this is Customs and Border Protection's Mobile Surveillance Capability. This strategy allows the Department to select two or more solutions that can be more thoroughly tested in the field before either down selecting to a single contractor or maintaining the option to take two or more solutions into production. This approach reduces risk to the Government through a "fly before buy" trial period, allows for the refinement of the requirements and allows more participation by industry which creates greater incentive for industry to invest than under a winner-take-all approach.

However, just using the "down select process" anywhere in the acquisition process to narrow the field will result in higher quality of proposals in the end and offer more opportunities to engage and communicate with a smaller number of bidders.

Better Contract Structure

One example is to set the page limit for a bid higher. Recently, DHS put out a call for proposals with a 30-page limit. With such a low page limit, DHS was forced to sift through many more proposals than necessary and re-purpose an already thin staff away from other projects. Thirty pages is not enough for a company to sufficiently describe its capabilities and solution for addressing DHS's need. More detailed requirements would ensure responses are compliant and deliver needed solutions.

Furthermore, this process did not encourage industry to participate in an effective way. Understanding what the Department or its components can do to encourage teaming can help improve the quality of the bids, help focus small business participation and help to streamline communication with a smaller number of bidders.

Contractor Workforce

The Department must also take into account the impact of their requests on the private sector workforce. A recent DHS program set an award date for April 2012 and required designations of key personnel in the proposal. A requirement of this kind, forecast this far out in the future, is extremely difficult if not impossible for industry to meet. To set aside personnel for a potential project a year from now puts

²TechAmerica, *TechAmerica's Twenty-First Annual Survey of Federal Chief Information Officers: Leveraging Technology to Improve the Performance of the Government*, (2011) http://www.techamerica.org/Docs/fileManager.cfm?f=2011_cio_survey.pdf.

industry in the difficult, costly, and potentially career-damaging position of long-term personnel guessing exercises.

TechAmerica would also recommend that the Department and its components leverage existing acquisition vehicles where it makes sense to best allocate both Government's and industry's scarce acquisition resources and lower the Government's costs. These efforts could be formalized in a "Best Practices" guide for contracting to be shared across all components.

REQUIREMENTS DEVELOPMENT PROCESS

Government can do a better job of developing requirements and linking them back to Government processes and mission goals. More RFIs would give industry a better idea of the end-user needs and allow DHS to better structure and refine their Requests for Proposals (RFPs) to allow for more innovative, best value solutions. As an example, TechAmerica would point to the technique used at the Department of Veterans Affairs whereby industry is brought in to meet with IT professionals. Through these exchanges, the needs of the end-user can be more clearly defined and translated into the IT requirements.

TechAmerica believes it is important to engage industry in proactive ways throughout the requirements process. Providing drafts, hosting industry days, and showing future plans with as much detail as possible can help industry to coordinate and meet the mission of DHS. We see our relationship as partners and are committed to the success of their mission. Threats evolve fast and technology evolves faster, making it critical that industry and Government are in sync.

INTEGRATING A FORMAL SYSTEMS ACQUISITION PROCESS

The Department of Homeland Security would benefit from a formalized systems acquisition process. Government has historically utilized long-term contracting to procure goods and services, however, in information technology, a procurement process based in agile development yields incremental capabilities faster with greater returns on investment. Technology is an evolving resource and upgrades and enhancements come rapidly. The adoption of an agile procurement process would permit Government to more rapidly deploy modular technologies and revisions rather than large-scale programs that have greater cost of money and time before mission success can be evaluated.

USE OF PILOT PROGRAMS

DHS does not use pilot programs enough. Legislation allows for the Department to take advantage of the use of pilots. The use of pilot programs allows an agency to try new approaches and obtain waivers from most statutory and regulatory structures which appear to add inefficiencies and costs to mission accomplishment. Pilots, done properly, allow the opportunity to test new processes; introduce commercial solutions; attract non-traditional suppliers; and speed delivery of needed solutions in the face of critical threats. The key to increased use of pilot programs is leadership within the Department. Leadership must promote and support pilot programs and provide top cover in the event the pilot doesn't deliver the expected outcome.

KEEP THE SAFETY ACT VIABLE

The Federal Government, and DHS in particular, must improve the integration of the SAFETY Act's risk management and liability protection provisions with homeland security technology acquisition practices.

Congress passed the SAFETY Act, part of the Homeland Security Act of 2002, to address the potential risk exposure for companies supplying anti-terrorism technologies. The SAFETY Act program has been operational since 2004, but DHS has yet to effectively integrate the SAFETY Act with its anti-terrorism technology procurement activities.

The DHS acquisition process and the SAFETY Act review process must be aligned, including expediting technical evaluations of SAFETY Act applications relating to products and services procured by DHS and other Federal Government entities. Addressing liability considerations at the forefront of technology acquisition activities will yield greater competition in, and better results for, investments in homeland security technologies.

DHS should improve efforts to educate Federal contracting officials regarding the SAFETY Act and the SAFETY Act-related changes to the Federal Acquisition Regulation ("FAR") that were effective February 17, 2009. FAR subpart 50.200 implements the SAFETY Act's liability protections to promote development and use of anti-terrorism technologies.

DHS should update and publish its agency-specific procurement regulations and procurement procedures in light of the FAR SAFETY Act provisions so that other Federal agencies may implement corresponding updates to their respective procurement regulations and practices.

Federal contracting officials should be instructed to ensure that SAFETY Act considerations are included among the procurement checklists that contracting officers must complete for technology procurements.

Federal program managers as well as contracting officers should consider whether requesting a SAFETY Act Pre-Qualification Designation Notice (as provided in the FAR) would enhance competition with respect to particular homeland security technology procurements.

DHS leadership must demonstrate focus and commitment to effective SAFETY Act implementation by improved integration with homeland security technology acquisition practices.

CONCLUSION

The people of DHS are doing great work in service of their country. Industry also has many people and companies that share this mission and seek to improve our partnership and communication to better accomplish this mission. The challenges we face in leveraging emerging technologies is more a question of process, not of people.

I would like to once again thank the committee for allowing TechAmerica to share its views, but more importantly, for focusing this hearing on the important need for improving the contracting process in order to ensure that most up-to-date technology is utilized in order to support the mission of DHS and secure our Nation. TechAmerica and our member companies look forward to continuing to work with you on this important issue. Thank you and I would be glad to answer any questions that you may have.

Mr. McCAUL. Thank you, Mr. Williams. The Chairman now recognizes Mr. Pearl to testify.

STATEMENT OF MARC A. PEARL, PRESIDENT AND CEO, HOMELAND SECURITY & DEFENSE BUSINESS COUNCIL

Mr. PEARL. Thank you, Mr. Chairman and Ranking Member Keating. I want to thank you for giving the Council an opportunity to testify before you today.

Our organization, as you well know, consists of the leading providers of homeland security solutions for our Nation. Our major purpose is to facilitate a substantive dialogue between industry and Government on critical homeland security issues and to ensure that the private sector's perspectives, innovation, expertise, and capabilities are maximized in securing our Nation.

In addition to my full written testimony, I would ask that the Council's principles on Federal contracting and procurement, which we conducted a couple years ago as a part of a major survey, be made part of this record.

My testimony today focuses on providing you with our collective industry's perspective on how DHS and Congress can work together more effectively with the private sector to improve the homeland security procurement and acquisition process. While the challenges associated with contracting and procurement are complex, as your opening comments stated, as well as the previous panel went into, the Council believes that some of the following steps can further improve the processes and procedures leading to our shared goals and mission, which is mission success.

Three things. The Department needs to develop a long-term acquisition strategy. Second, it needs to develop open and transparent processes, practices, and procedures that facilitate a well-defined contract requirement which will generate competition and

then provide incentives for the private sector to participate in the process. Third, a standardized centralized procurement process together with an educated workforce capable of planning and executing the process.

First in summary. The first one, the need to develop a long-term strategy. Industry serves, as you well know, a vital role in providing the technologies, the products, and the services, what we call the solutions, in the whole aspect of homeland security. DHS needs to operationalize and succeed in its mission to in essence bring those in. Industry does not, however, have limitless resources to develop to provide those homeland security solutions in a void. Particularly, in the current economic environment we cannot waste time or money on building speculative technologies that we believe should or could be incorporated into our Nation's homeland security efforts. The development of mid-term and long-term strategic acquisition plans would create a more predictable homeland security acquisition environment, allowing then the private sector to then have the ability to anticipate what the Government needs and efficiently marshal the resources in order to meet them. When companies are given a blueprint of what the Government's future needs are, they will have the time to plan appropriately, align technology, align financial and personnel resources to address those needs.

Now, we do applaud DHS's announcement this past week on acquisition planning forecast system that is intended to provide the private sector with some real-time access to the DHS forecast of contract opportunities in the near- to the mid-term, but had that will not satisfy the need for long-term strategic acquisition planning.

Second is with respect to the need to develop early open and transparent processes. The DHS, working with industry, must better define and calibrate requirements to match mission objectives and achieve mission goals. Because the Government cannot define those needs in a vacuum or by itself alone, we believe strongly that the processes, the practices, and the procedures that facilitate early substantive engagement with the private sector in an open and transparent manner should be developed long before an RFP is initiated. Additionally, as Mr. Williams mentioned, DHS should conduct more industry days sufficiently in advance of the procurement, not during it or when it already knows what it is going to be. RFIs and websites such as FedBizOpps could be used much more effectively.

Last, the need to develop a standardized and centralized procurement process. Much progress has been made in the last 8½ years, but DHS still needs a stronger, more centralized acquisition process that moves away from the current stove-piped environment. At least 11 unique and potentially duplicative procurement processes with limited DHS-wide leverage still exists across the agency. A clear DHS-wide process, acquisition process, and the use of the same communication tools would not only enhance efficiency but would provide the needed transparency so that end-users, acquisitions and operations officials, and industry could work more effectively together.

In conclusion, I want to reiterate our shared goal, to achieve the most successful outcome for all stakeholders through a process that is transparent, accountable, timely, cost-effective and that encourages competition, innovation and investment in the homeland security marketplace. If industry, Congress, and DHS all work together to find ways to communicate and engage prior to and throughout the procurement process, mission success is that much more attainable. I thank you for the opportunity. The Council looks forward to working with this subcommittee and the entire committee, and I will take any questions.

[The statement of Mr. Pearl follows:]

PREPARED STATEMENT OF MARC A. PEARL

JULY 15, 2011

INTRODUCTION

Chairman McCaul, Ranking Member Keating, and distinguished Members of the subcommittee, I thank you for giving the Homeland Security & Defense Business Council an opportunity to appear before you today to discuss the important issues that relate to the Department of Homeland Security's (DHS) procurement policies and procedures, particularly as they relate to developing and deploying emerging technologies, as well as the Department's outreach to the private sector.

I am Marc Pearl, President and CEO of the Council, a non-partisan, non-profit organization of the leading homeland security solution providers. Collectively, our members employ more than 3 million Americans in all 50 States and provide expertise in technology development and integration, facility and networks design and construction, human capital, financial management, and program management. We are honored and proud to work with our country's leaders in civilian, defense, and intelligence agencies to advance and achieve their strategic initiatives. The purpose of the Council is to facilitate two-way substantive dialogue between the private sector and Government on critical homeland security issues and to ensure that the private sector's perspectives, innovation, expertise, and capabilities are maximized in securing our Nation.

At the outset, the Council wants to express our appreciation to this subcommittee and to the full Committee on Homeland Security for your continued leadership on the full range of issues associated with improving the contracting and procurement process within Government and encouraging partnerships and substantive engagement with industry.

In addition to this written testimony, we would also like to bring to the subcommittee's attention two relevant documents that serve to further illuminate the Council's perspective. The first is our *Principles on Federal Contracting and Procurement*, developed in late 2009 after surveying our entire membership, which describes some of the challenges surrounding Federal contracting and procurement. We have shared this document with Secretary Napolitano and other representatives within DHS. The second document was my testimony before the House Committee on Science, Space and Technology's Subcommittee on Technology and Innovation, in a hearing entitled, "*An Overview of Science and Technology Research and Development Programs and Priorities to Effectively Protect Homeland Security*" that was held this past March. That testimony focused on research and development (R&D) programs and recommendations that related to the reorganization of the DHS Science & Technology (S&T) Directorate. While the R&D issues in the S&T Directorate are not the emphasis of our testimony this morning, we are cognizant of the Oversight Subcommittee's deep and abiding interest in this issue and how it views its interrelated nature to the contracting and procurement issue. It is our understanding that members of the subcommittee's staff are aware of this testimony.

The Council's testimony today will focus on providing the subcommittee with our collective industry's perspective on how DHS and Congress can work together more effectively with the private sector to improve the homeland security procurement and acquisition process. As recognized in the April 2011 DHS Office of Inspector General (OIG) Report on "DHS Oversight of Component Acquisition Programs," acquisitions consume a significant part of the DHS annual budget and are fundamental to the Department's ability to accomplish its mission. Acquisition management is a complex process that requires an effective and efficient acquisition management structure. It begins with the identification of a mission need; continues

with the development of a strategy, process, and a strong organization to fulfill that need; and concludes with contract closeout after satisfactorily meeting the terms. If any infrastructure component is deficient, the entire process is at risk for failure.

Council members—indeed all providers of homeland security solutions for our Nation—together with DHS and Congress, share the same goal: To achieve the capabilities needed by DHS for mission success through a process that is transparent, accountable, timely, cost-effective, and that encourages competition, innovation, and investment in the homeland security marketplace. No one wants to see, nor can afford, to have time, money, and resources wasted. To reach this shared goal, the Council strongly believes that we need to concentrate on developing three things:

- (1) A long-term acquisition strategy;
- (2) Open and transparent processes, practices, and procedures that facilitate well-defined contract requirements, generate competition, and provide incentives for the private sector to participate in the process; and
- (3) A strong organization with a standardized and centralized procurement process and a workforce capable of planning and executing the process.

In addition to sharing the same goal, we each have a role in meeting the goal. Congress can provide funding, direction, and oversight to the programs and capabilities needed by DHS to achieve its mission. If DHS and industry work together, with DHS developing greater engagement and communication with industry prior to and throughout the entire procurement process, we can leverage already existing technology, experience, expertise, and dollars to accomplish that shared goal.

While the challenges associated with contracting and procurement are complex, the Council is recommending the following steps that we believe will further improve the process, procedures, people and the ultimate outcome—mission success:

1. Development of a Mid- to Long-term DHS Strategic Acquisition Plan

The private sector serves an important role in providing the technologies, products, and services—“the solutions”—that DHS needs to operationalize its mission. However, industry does not have limitless resources to devote to homeland security solutions in a void. Particularly in the current economic environment, the private sector cannot waste time and money on building speculative technologies that they believe “should” or “could” be incorporated into our Nation’s homeland security efforts. They want to develop and deliver the solutions that the Department and our Nation needs.

While we do not want to diminish the value of the Quadrennial Homeland Security Review (QHSR), the Bottom-Up Review process, and DHS’ overall 5-year strategic plan, the Council strongly believes that DHS must develop a mid- to long-term strategic acquisition plan. The lack of a predictable homeland security acquisition environment impedes industry’s ability to anticipate Government needs and efficiently marshal the resources to meet them.

Such a strategic acquisition plan would indicate the intended direction, or change in direction, with programs of record and other major, multi-year procurements, as well as identify DHS acquisition guiding principles, objectives, and targets. This would give companies a blueprint for Government’s future needs and the time to plan appropriately by aligning financial and personnel resources towards addressing those needs.

In the past week, DHS announced the upcoming release of the *Acquisition Planning Forecast System*, which is intended to provide the private sector with real-time access to the DHS forecast of contract opportunities. We applaud the development of this tool as a way of attempting to address the issue in the near to mid-term. While it does not satisfy the larger issue of long-term strategic acquisition planning, we recognize it as a step forward in the right direction. Any assistance that Congress can provide in guiding the development of a long term strategic acquisition plan would go a long way in providing the foundation for all interested parties to achieve mission success.

2. Development of Open and Transparent Processes, Practices, and Procedures That Facilitate Well-Defined Contract Requirements, Generate Competition, and Provide Incentives for the Private Sector to Participate in the Process

A. Engaging the Private Sector Before the Procurement Process Even Begins Will Result in Well-Defined Contract Requirements and Better Performance/Results

The private sector wants to develop the capabilities that Government needs to achieve mission success. To accomplish this, the Government must provide industry with well-defined contract requirements. If the requirements in a procurement contract are vague and subject to different interpretations, it increases the potential for

an increased or lost cost of development, duplication of effort, and a resulting product or service that fails to meet the Government's expectations.

Defining the needs in a clear and concise fashion is not a job that Government can or should do alone. DHS must develop processes, practices, and procedures that facilitate early substantive engagement with the private sector in an open and transparent manner long before a Request for Proposal (RFP) is initiated. Industry input is essential to help define and calibrate requirements to match mission objectives and achieve mission goals. The more complex the procurement, the more critical the need for an open information exchange. Transparency is also necessary to ensure that no one feels that a particular technology, product, service, or solution is being highlighted or unfairly selected. It also helps in defining the ultimate need. If all participants understand and adhere to "rules of engagement," we can optimize the input and exchange between the public and private sectors.

Contracting professionals often have a limited understanding of the private industry and limited exposure with the skills, experiences, and capabilities of potentially valuable companies. By engaging with the private sector prior to beginning the procurement process, DHS personnel, for example, can conduct more effective market research and gain a greater understanding of existing and emerging technologies, learn the appropriate industry terminology and concepts associated with the desired service or equipment, identify potential contractors that provide the item, and determine the correct scope of the requirements that best fit the existing vendor base.

The Council strongly supports DHS engaging the private sector by conducting more Industry Days sufficiently in advance of procurements to enable the Government to examine and understand the technology that already exists and begin a dialogue that helps define requirements. Industry is also encouraged to see the Government issuing more Requests for Information (RFIs) on the *FedBizOpps* website, and hopes this trend continues in the future. An RFI provides a mechanism for the Government to seek advice and recommendations from the private sector before a RFP is issued. It allows the Government to conduct market research to identify what kind of products or service solutions are commercially available. It asks industry to offer solutions for agency requirements or objectives; and facilitates the collection of information about companies with the appropriate capabilities, products, experience, and expertise. Through this interactive tool, Government and industry can have a continuous two-way dialogue that results in requirements that are greatly improved from when the RFI was first issued.

We must stress that the exchange of information with the private sector cannot stop at the issuance of a RFP, it must continue throughout the entire procurement process, particularly when information previously provided has changed. DHS should continue to use and further develop acquisition websites that provide information for specific identified procurements, definitions of terminology and milestones, and regular updates to time schedules, future needs, and other previously provided information.

B. Use of Procurement Vehicles That Generate Competition, but Still Provide Incentives for the Private Sector to Participate in the Process

The Council also stresses the need for procurement vehicles that generate competition and provide incentives for the private sector to participate in the process. Industry supports the need for competition in the contracting process but stresses the need for DHS to balance these interests and understand the acquisition from the viewpoint of the contractor. Too much and/or too little competition is counter-productive.

One type of procurement vehicle often used by Government is the indefinite delivery/indefinite quantity (IDIQ) contracts. While these types of contracts provide flexibility to the Government, there have been problems when the selection criteria are not well-defined or the process is too burdensome. The goal must be to ensure that the task order vehicle is responsive to both Government and to the client. The private sector must have an incentive on the task order. If too many companies participate, a company may think they have no chance of being awarded the contract and decide it is not worth the time or money to participate. On the other side, if too many companies are given task orders, it becomes difficult and time-consuming for Government to manage the contracts and make good decisions.

DHS must do a better job of selecting a reasonable number of companies to participate in the process so that companies have an incentive to compete. This will result in better time management and ensure contract outcomes that are in the best interest of Government and the private sector.

3. *Develop a Strong Organization That Has a Standardized and Centralized Procurement Process and a Workforce Capable of Planning and Executing the Process*

A. *Development of a Standardized and Centralized DHS Acquisition and Procurement Process*

DHS needs a stronger, more centralized acquisition process that moves away from the current stovepiped environment. While much progress has been made since its creation, DHS still has a long way to go in ensuring collaboration, coordination, and communication across the agency. Combining almost 2 dozen agencies with different processes and cultures to form a new department was guaranteed to create challenges.

The Council believes that it is critical to establish an operating policy that facilitates effective engagement within DHS' components and with the private sector. There are at least 11 unique procurement processes across the agency with limited DHS-wide leverage. Large components run their own processes in different ways and many times inconsistently. This can result in duplicative efforts. DHS needs more communication internally and with other agencies to effectively identify potential technologies that it could leverage in support of other missions. These opportunities are often only discovered when the private sector brings them to their attention. The development of a clear DHS-wide acquisition process and the use of the same communication tools would not only enhance efficiency, but would provide needed transparency so that end-users, acquisition and operations officials, and industry can work together.

In addition, DHS must also have a strong R&D process and S&T Directorate that keeps us ahead of the curve so we can obtain the most effective and efficient technologies, services, and solutions that address our country's security needs. If we can improve coordination of these programs within the procurement and acquisition process, we will get even better results. As I mentioned in my introduction, my recommendations on these issues are contained in my testimony from March 2011 that focused on reorganization of the DHS S&T Directorate. While not the focus of my testimony today, I draw your attention to those recommendations because the R&D and S&T issues contribute to a strong organization and are interrelated to the contracting and procurement issue.

B. *Ensure a Workforce Capable of Planning and Executing the Procurement Process by Increasing the Quantity and Quality of Public Sector Contracting Personnel*

We urge Congress to recognize and help address the shortage of acquisition and procurement staff across the Department. DHS needs the ability to increase the number of procurement officers with expertise in technology, engineering, and management to accomplish the complex operational aspects of oversight and review. Contracting officers must be accessible, interactive, and open to sharing concerns and approaches for various aspects of a particular procurement. They must also value and understand input and substantive dialogue with the private sector both pre- and post-award. Such an exchange is particularly valuable at a time when procurements have become more complex. To accomplish these goals, Congress should support programs that further the development, training, and retention of acquisition professionals. This could be accomplished, in part, by ensuring continued funding for the acquisition "intern" program.

The Council has long advocated, for example, that DHS develop an exchange program with the private sector to improve the management abilities and technical and professional competencies of its employees. A professional exchange program would offer DHS direct insight into the philosophy, procedures, and practices of industry. It would provide public sector professionals with an opportunity to examine industry policies and processes, as well as learn first-hand how industry addresses contracting and procurement issues. This would allow DHS to interpret the needs of the Department in industry terms. By studying the best practices of the industry, Government professionals are able to bring new knowledge, understanding, and empathy back into the Department to improve its processes. The process would also benefit industry, which would gain a better understanding of the unique perspective and experience of the DHS professional. Obtaining such direct insight and experience is currently unavailable in DHS.

CONCLUSION

As I stated in my introduction, we all share the same goal: To achieve the most successful outcome for all stakeholders through a process that is transparent, accountable, timely, cost-effective, and that encourages competition, innovation, and

investment in the homeland security marketplace. Today's procurement processes need to be more flexible, inclusive, and dynamic to change. The Council and its members have worked closely and successfully to nurture a substantive relationship with the Management and S&T Directorates to discuss and develop innovative solutions to protect our country. But even amidst the establishment of these relationships, the business sector, as a whole has struggled to comprehend the long-term strategic needs and goals of DHS. This has made our long-term investments toward new technologies that might become effective solutions, challenging at best. Similar to the Federal sector, industry has limited resources to devote to developing homeland security solutions in a void. As we have already stated, they cannot dedicate resources to building speculative technologies—we want to deliver the solutions that DHS and our Nation needs.

We respectfully ask for you to consider, provide guidance and continued oversight, and help facilitate the steps we have recommended to improve the process and outcome for all stakeholders:

1. Development of a long-term acquisition strategy;
2. Development of open and transparent processes, practices, and procedures that facilitate well-defined contract requirements, generate competition, and provide incentives for the private sector to participate in the process; and
3. Development of a strong organization with a standardized and centralized procurement process and a workforce capable of planning and executing the process.

While DHS is still a relatively young agency and is still evolving, there is no need to constantly reinvent the wheel. There are many best practices and lessons learned, (both positive and negative), available from other Federal agencies that have decades of experience with procurement and acquisitions.

On behalf of the Homeland Security & Defense Business Council, I appreciate the opportunity to provide the collective perspectives of industry on the important issues before the subcommittee. The Council is willing to provide or facilitate any support, expertise, and input you need to ensure that we can all work together to achieve mission success.

Mr. MCCAUL. Thank you, Mr. Pearl. We look forward to working with you as well.

Mr. Amey is now recognized.

STATEMENT OF SCOTT AMEY, GENERAL COUNSEL, PROJECT ON GOVERNMENT OVERSIGHT

Mr. AMEY. Thank you. I want to thank Chairman McCaul, Ranking Member Keating, and the subcommittee for asking the Project On Government Oversight, also known as POGO, to testify about issues related to homeland security contracting.

Throughout its 30-year history POGO has created a niche in investigating, exposing, and helping to remedy waste, fraud, and abuse in Federal contract spending. We have supported many reforms that enhance competition, accountability, and oversight. Additionally, we have voiced concern about contracting vehicles that place taxpayer dollars at risk. We consider our work essential to protecting taxpayers because the Government is now spending over \$530 billion each year on contracts for goods and services.

DHS's mission is extremely varied and difficult, and must protect the President, oceans, borders, airports, and help those in need after natural disasters. As a result, DHS has to be on the cutting edge of new technologies and services to stay at least one step ahead of threats to our Nation, yet it still must protect taxpayers and spend money wisely, which raises two questions: No. 1, what are we buying? No. 2, how are we buying it?

I will discuss the how first because the numbers are relatively positive. DHS spent \$13.6 billion on contracts in fiscal year 2010, which is down from its peak spending of \$16.5 billion in fiscal year 2006. The purchase of services is outpacing goods with approxi-

mately \$10 billion being spent on service contracts. That might raise some concerns for this subcommittee as service contracts can be difficult to administer and oversee due to the fact that DHS is paying for time and hours worked.

For the most part the agency has awarded contracts under competitive procedures. According to Federal procurement data, approximately 85 percent of DHS contract dollars, which is 74 percent of its transactions, were awarded through competitive procedures. These numbers have dramatically improved since fiscal year 2006 when DHS was awarding competitive contracts less than 60 percent of the time.

Data on the types of contracts utilized is incomplete and therefore this subcommittee should consider requesting detailed information about the types of contracts being used. This subcommittee might also want to inquire about DHS's use of other transaction authority, which was raised in this morning's comments, especially since that authority is set to expire on September 30.

Hearings have been held and reports have been issued about DHS's use of OTs, but many of those are 3 years old. My written testimony provides a more detailed summary of concerns that POGO has related to OTs, but I will raise the following questions that this committee should consider asking:

Is DHS's other transaction authority still meeting policy objectives? Are OTs being used in the right situations? Are oversight controls ensuring that OTs are not placing taxpayer funds at risk? Where is the latest GAO annual report authorized by section 831? With daily advances in technology are the items procured under other transaction authority still in use and essential in protecting against emerging threats? I would say that is probably not even just for OTs, but that is also for S&Ts, T&Es.

So I formed a whole sentence with acronyms. Hopefully I get a pat on the back for that.

Are OTs being converted to FAR-based contracts? Assuming that DHS needs other transaction authority, is this subcommittee considering alternatives to the annual sunset provision?

More to the point of today's hearing is whether DHS is effectively leveraging emerging technologies. From a contracting perspective this is a difficult question to answer. DHS certainly bought new technologies, but how much safer are we? Many years ago I testified before the full Homeland Security Committee and stated that DHS was buying infant technologies that were unproven and sometimes provided little or no benefit to the agency. It is one thing for those programs to fail while in their infancy, but it is another for those or other troubled programs to do so 10 years later. Any questions about DHS's effectiveness might only be answered if and when the next disaster or terrorist attack take place.

A GAO report released yesterday documented that in the past DHS technologies were deployed before appropriate testing and evaluation was successfully completed, including the deployment of technologies that had unreliable performance, including the deployment of technologies that included the removal of 101 airport puff-er machines from airports, as well as SBInet now being kind of scrapped and reevaluated. Without more information and oversight it is nearly impossible to determine if DHS is effectively leveraging

new technologies that would protect the country from emerging threats, and my fear is that only time will tell.

Thank you for inviting me to testify today. I look forward to answering any questions that you may have and to working with the subcommittee to further explore how DHS contracting can be improved.

[The statement of Mr. Amey follows:]

PREPARED STATEMENT OF SCOTT AMEY

I want to thank Chairman McCaul, Ranking Member Keating, and the subcommittee for asking the Project On Government Oversight (POGO)¹ to testify about issues related to Department of Homeland Security contracting. I am Scott Amey, POGO's General Counsel.

Throughout its 30-year history, POGO has created a niche in investigating, exposing, and helping to remedy waste, fraud, and abuse in Government contract spending. We have supported many reforms that enhance competition, accountability, and oversight. Additionally, we have voiced concerns about contracting vehicles that often place taxpayer funds at risk, including cost-reimbursable, time and material, and labor hour contracts, as well as "other transaction authority."² Many acquisition reforms were imposed prior to the large increase in Federal contract spending (which exceeded \$537 billion in fiscal year 2010), consolidation in the contractor community, the large-scale hiring of contractors to perform Government services, and increased demands on the acquisition workforce to do more with less, which has led to waste, fraud, and abuse. Fallout from the War on Terror and Hurricane Katrina also highlight how drastically different the Federal Government's contracting landscape is now from what it was in past years.

DHS's mission is to prevent terrorist attacks in the United States, reduce America's vulnerability to terrorism, and minimize damage from terrorism and natural disasters. To fulfill this mission, DHS has a vast organizational mandate that ranges from protecting the President (U.S. Secret Service), to protecting our oceans (U.S. Coast Guard), to protecting our borders (Customs & Border Protection and Immigration & Customs Enforcement), to protecting our airports (Transportation Security Administration), and to helping every town, city, county, and State in relief, recovery, and reconstruction efforts (Federal Emergency Management Agency). As a result, DHS has to be on the cutting edge of new technologies and services to stay at least one step ahead of threats to our Nation. Yet, it still must protect taxpayers and spend money wisely.

HOW DHS IS BUYING

According to Federal contract data, the Department of Homeland Security spent \$13.6 billion in contracts in fiscal year 2010.³ That total is less than the agency's peak contract spending total of \$16.5 billion in fiscal year 2006.

DHS spent \$3.2 billion on goods and more than \$10 billion on services in fiscal year 2010. For the most part, the agency has awarded contracts under competitive procedures—according to Federal data, approximately 85 percent of DHS contract dollars (and 74 percent of contract transactions) were awarded through competitive procedures. These numbers have dramatically improved since 2006 when DHS was awarding genuinely competitive contracts less than 60 percent of the time.

Data on the type of contracts utilized is more difficult to analyze, as much of that data is incomplete. That said, it appears that DHS used fixed-price contracts for over \$7 billion worth of contracts in fiscal year 2010. The data further indicate that nearly \$4 billion was spent using riskier types of cost-reimbursement and time and material contracts that are prone to waste, fraud, and abuse, and should be carefully watched.

"Other transaction authority" (OTA) is another risky procurement vehicle that should be a concern to this subcommittee, especially since that authority is set to

¹ Founded in 1981, POGO is a nonpartisan independent watchdog that champions good Government reforms. POGO's investigations into corruption, misconduct, and conflicts of interest achieve a more effective, accountable, open, and ethical Federal Government. For more information about POGO, please visit www.pogo.org.

² The Federal Acquisition Streamlining Act of 1994 (FASA) (Public Law 103-355), the Federal Acquisition Reform Act of 1996 (FARA) (Public Law 104-106), the Services Acquisition Reform Act of 2003 (SARA) (Public Law 108-136), and 10 U.S.C. § 2371 have removed taxpayer protections.

³ All contracting figures were compiled using USAspending.gov unless stated otherwise.

expire on September 30, 2011.⁴ Other transaction authority is a term commonly used to refer to the authority to enter into other transactions (OT) agreements other than contracts, grants, or cooperative agreements. OT agreements are customized agreements rather than contracts that can be specifically tailored based on the Government's needs. The intent was to lure leading-edge non-traditional companies that were not doing business with the Government.⁵ The inherent problem, however, is that rather than the Government controlling what it needs, the OT contractors are placed in the powerful position of saying "here's what we will do for you."

Other transactions generally are not subject to the Federal laws and regulations governing procurement contracts. Therefore, OTA is exempt from the usual contracting controls and oversight mechanisms in contracting statutes, the Federal Acquisition Regulation (FAR) (in particular Truth in Negotiations Act regulations and Cost Accounting Standards), Government audits, and Small Business Act requirements for small business participation.⁶

The Congressional Research Service has voiced several concerns about the use of OTs:

"The nature of other transaction authority contributes to the challenge of evaluating OTs. Freed from adhering to the FAR and certain procurement statutes, an agency can tailor an OT to the needs and circumstances of a particular project and the participants, which means the usual methods or vehicles for monitoring contractor performance—such as contract administration and audit services (Part 42 of the FAR) and quality assurance (Part 46 of the FAR)—are not required. Additionally, aside from counting the number of traditional contractors, it is unclear what features of other transactions can be readily measured or evaluated . . . [I]t is particularly challenging to evaluate the benefits of OTs."⁷

Unlike DoD, which had struggled to lure non-traditional contractors,⁸ DHS has been successful in doing so. In 2008, GAO found that nontraditional contractors, including small businesses and contractors that had not recently worked for the Government, were involved in 83 percent of the other transaction agreements GAO reviewed.⁹ Despite this encouraging benchmark, however, GAO uncovered several problems:

- DHS did not have all the information it needed to determine whether other transaction agreements were successful or that their benefits outweighed their risks.
- DHS was not able to accurately assess whether it was using other transaction agreements to effectively negotiate intellectual property and data rights.
- DHS could not assure successful outcomes due to inadequate staffing levels and high turnover in its contracting workforce.

⁴ Department of Defense and Full-Year Continuing Appropriations Act, 2011 (Pub. L. 112–10), Section 1651, April 15, 2011. In 2002, DHS received OTA for research and development prototype projects. Homeland Security Act of 2002 (Pub. L. 107–296), Section 831, November 25, 2002. The Homeland Security Act refers to the authority that the Secretary may exercise to carry out research and development projects and prototype projects under 10 U.S.C. § 2371 and the National Defense Authorization Act for Fiscal Year 1994 (Pub. L. 103–160), Section 845, November 30, 1993. The authority, initially granted for 5 years, has been extended each year, but sunset on September 30, 2011. 6 U.S.C. 391(a). The Transportation Security Administration also has authority to enter OT agreements. Aviation and Transportation Act, (Pub. L. 107–71), Section 101, November 19, 2001; 49 U.S.C. § 106(l)(6).

⁵ Congressional Research Service, "Other Transaction (OT) Authority," January 27, 2010, pp. 23–25. http://assets.opencrs.org/rpts/RL34760_20100127.pdf (Downloaded July 14, 2011) (Hereinafter Other Transaction (OT) Authority).

⁶ Other Transaction (OT) Authority, pp. 18–22.

⁷ Other Transaction (OT) Authority, pp. 22–23.

⁸ Other Transaction (OT) Authority, pp. 23–24; 72% of the research and 97% of the prototype DoD OTA funding went to traditional contractors in the late-1990s. Testimony of Donald Mancuso, Deputy Inspector General Department of Defense, before the Subcommittee on Readiness and Management Support of the Senate Committee on Armed Services on Defense Acquisition, April 26, 2000, p. 15. <http://www.dodig.mil/audit/reports/fy00/00-118.pdf> (Downloaded July 14, 2011)

⁹ GAO "identified a total of 50 nontraditional contractors who participated in 44 (83 percent) of the agreements [it] examined, with multiple nontraditional contractors involved on 8 agreements. Half of these contractors had not recently worked for the government." Government Accountability Office, "Department of Homeland Security: Improvements Could Further Enhance Ability to Acquire Innovative Technologies Using Other Transaction Authority," GAO–08–1088, September 23, 2008, p. 7. <http://www.gao.gov/new.items/d081088.pdf> (hereinafter GAO–08–1088)

- DHS lacked the resources, in terms of knowledge and workforce capacity, to maximize the benefits and ensure the transparency of other transaction agreements.¹⁰

DHS appears to have significantly reduced its use of and dollars spent on OT agreements,¹¹ but those agreements still deserve to be reviewed and audited. Due to the inherent risk of OT acquisitions and the lack of reporting by DHS and GAO,¹² this subcommittee should consider the extent to which DHS's OTA should be extended, request information about the OT agreement requirements and deliverables, and ask the agency about OT programs that can be immediately converted to FAR-based contracts.

WHAT DHS IS BUYING

More to the point of today's hearing is whether DHS is effectively leveraging emerging technologies. From a contracting perspective, this is a difficult question to answer. DHS certainly bought new technologies, but how much safer are we?

Many years ago, I testified before the full Homeland Security Committee and stated that DHS was buying infant technologies that were unproven and sometimes provided little or no benefit to the agency. We are still paying the price for poor policies and decisions resulting from the Deepwater and SBInet programs. It was one thing for those programs to fail while in their infancy, but it is another for those and other troubled programs to do so 10 years later. Any questions about DHS's effectiveness might only be answered if and when the next natural disaster or terrorist attack take place.

Additionally, DHS's reliance on service contractors also makes it difficult to quantify the effectiveness of its buying because we are paying for time rather than tangible goods. As often is the case with service contracts, they are hard to measure and evaluate. For example, in March 2009, DHS Secretary Janet Napolitano instituted an efficiency review "expected to lead to hundreds of millions of dollars in cost avoidance."¹³ That review included "launching efforts to reduce the Department's reliance on contractors and contract services to strengthen our Federal workforce."¹⁴ Simply stated, DHS wanted to know more about the services it was procuring and the cost of those services. Unfortunately, DHS's estimate of the number of its service contractor employees was off by 100,000,¹⁵ and I have not heard about any DHS efforts to streamline, reduce, or cut services that are not needed or that were or are wasting taxpayer dollars. Without more information and oversight, it is nearly impossible to determine if DHS is effectively leveraging new technologies that would protect the country from emerging threats—only time will tell.

RECOMMENDATIONS

POGO respectfully requests that this subcommittee consider the following recommendations to improve DHS contracting:

¹⁰GAO-08-1088, pp. 12-16.

¹¹Government Accountability Office, Statement of John K. Needham, Acting Director, Acquisition and Sourcing Management, before the Subcommittee on Emerging Threats, Cybersecurity, and Science and Technology, House Committee on Homeland Security, "Department of Homeland Security: Status and Accountability Challenges Associated with the Use of Special DHS Acquisition Authority," GAO-08-471T, February 7, 2008, p. 6. <http://www.gao.gov/new.items/d08471t.pdf>

¹²Homeland Security Act of 2002 (Pub. L. 107-296), Section 831(b), November 25, 2002. GAO is required by statute to report to Congress on DHS's ability to lure non-traditional contractors, results of OT acquisitions, and whether safeguards are needed. The last report issued by GAO was in 2008. GAO-08-1088.

¹³Department of Homeland Security, Office of the Press Secretary, "Secretary Napolitano Rolls out DHS Efficiency Review Initiative," March 27, 2009. http://www.dhs.gov/ynews/releases/pr_1238172270388.shtm (Downloaded July 14, 2011)

¹⁴Department of Homeland Security, Office of the Press Secretary, "Secretary Napolitano Announces Two New Efficiency Review Initiatives," April 7, 2010. http://www.dhs.gov/ynews/releases/pr_1270667336512.shtm (Downloaded July 14, 2011)

¹⁵The DHS has begun to keep statistics on the size of its shadow Government workforce of contractor employees. It had estimated that the size of its contractor employee workforce was 200,000, as compared with 188,000 DHS employees, but recently changed the estimate to 110,000 contractor employees. Ed O'Keefe, "Eye Opener: Homeland Security Has More Contractors Than Feds," *The Washington Post*, February 24, 2010. http://voices.washingtonpost.com/federal-eye/2010/02/eye_opener_homeland_security_h.html (Downloaded September 27, 2010); Sean Reilly, "Whoops: Estimate on number of DHS contract employees off by 100,000 or so," *Federal Times*, April 11, 2011. <http://blogs.federtimes.com/federal-times-blog/2011/04/11/whoops-estimated-number-of-dhs-contract-employees-off-by-at-least-100000/> (Downloaded April 12, 2011)

1. Ensure that full and open competition is the rule, and restore the definition of “competitive bidding” to require at least two bidders.
2. Require that risky contract vehicles are used in limited circumstances and only when supported by proper justifications and oversight protections.
3. Review DHS commercial item and service acquisitions to ensure that a commercial marketplace exists.
4. Investigate how prime contractors bill the Government at their own labor rate(s) rather than the rate they pay their subcontractors on Time and Material or Labor Hour (T&M/LH) contracts.
5. Confirm that contractors are not performing inherently Governmental functions, which must be performed by civil servants.
6. Reestablish the taxpayer-protection checks and balances that have been removed from the contracting system, including requiring contractors to provide cost or pricing data to the Government for all contracts except those where the actual goods or services being provided are sold in substantial quantities in the commercial marketplace, and restoring the Truth in Negotiations Act (which would result in enormous improvements in contract pricing, negotiation, and accountability, and save taxpayers billions of dollars per year).
7. Review DHS’s use of the suspension and debarment system, especially as it has been applied to large contractors with repeated histories of misconduct.
8. Provide a fair playing field for all DHS contractors to ensure that all vendors are open to doing business with DHS.
9. Require copies of contracts and task and delivery orders to be made public on *USAspending.gov*.
10. Examine and improve the conflict of interest and ethics system to ensure that DHS employees comply with all Federal conflict of interest laws and regulations.
11. Renegotiate OT agreements under FAR-based contracts (e.g., FAR Part 15) as soon as practicable.

Thank you for inviting me to testify today. I look forward to answering any questions and working with the subcommittee to further explore how Department of Homeland Security contracting can be improved.

Mr. McCAUL. Thank you, Mr. Amey. I just want to follow up on some of the discussion we had with the first panel. I brought up the first-hand accounts of private sector companies wanting to do business with the Department and just frankly just not getting access. The two examples, one is a company that makes holographic maps that the Army is using. I wrote three letters to help facilitate that kind of a meeting and they are not even responding to me. They can’t get in the door. Even in spite of the fact that Border Patrol looked at these maps and really liked them and recommended to Washington that they look at procuring these maps.

Another instance a guy that—basically they have a device that can detect heartbeats which could be used in a lot of instances and it can be used down on the border too to look at human trafficking. It was originally designed by the Federal Government, this science, and this individual can’t get a meeting. We heard from Dr. O’Toole, but basically her response to that was, gee, I guess I will respond to your letter, but also you know we are just too small, the private sectors are big, and industry and our office is just too small to accommodate facilitating these kind of meetings. I just find that to be inadequate in my judgment. Mr. Williams and Mr. Pearl, do you have any comments on that?

Mr. WILLIAMS. I do, Congressman. I think the stories you told are all too typical of dealings with DHS over the past few years. I think it is very sad that they don’t understand the benefits of engaging with the private sector, hearing about new ideas that could save money, could improve their mission, and I think it also goes to the attitude of individuals and a culture to kind of close the doors. I believe, as we have all talked about, DHS needs to engage

the private sector, they need to do it throughout the process and they need to do it in a very open and collaborative fashion. That is not happening today.

I did, after the first hearing, went outside and talked to Nick Nayak and he said, that is unforgivable that you had to write three letters that were not responded to. I think he is trying to change things. But again, as people have talked about, you have got a lot of different procurement officers there, and I think some of them are just ridiculously gun-shy about talking to the private sector. My experience in Government is the only way you are successful is if you engage everyone. It doesn't, it isn't a matter of time or people, you can make the time to do these right things. They just don't do it.

Mr. MCCAUL. I tend to agree with you on that. Mr. Pearl, do you have any comments?

Mr. PEARL. Rather than speaking to any one particular technology, this is something that I have seen for 15 or 20 years in Washington when I started. In fact, the previous—I was at TechAmerica when it was called ITAA 16 years ago, and it was never about and should not be about an individual company trying to get its foot in the door. What I was speaking to was in point of fact a process, a blueprint, so that whatever the company is, whether it is a major company, a large company or whether it is a small garage company that is entrepreneurial, you shouldn't build in a void. Though I have the greatest technology for X or the wonderful process for Y, if in fact the Department doesn't want it, and I am not saying that they do or don't want the kinds of things that you talked about, but if the Department doesn't want it then why am I building this in the first place because I think it is going to help at the border, I think it is going to help at cargo or emergency management or whatever it is. So what we are talking about is this engagement before an individual company comes into the door and says I have got the greatest, you know, whiz-bang technology that you have ever seen, and their response is, well, I don't know if we are ever going to use it, when it would be deployed, whether I have the money for it.

There should be this dialogue that both Jim and I are talking about that speaks to the issue of let's talk about a blueprint, what is our mission goal, not what is checking the box, what are we going to try to procure for \$100,000 here or \$100 million there or \$1 billion down the road. We are trying to look at the broader component. All we have gotten thus far is these things that are called, for example, a QHSR or a bottoms-up review, the kind of quadrennial review. That is not a blueprint, that is everyone commenting on what should be. What we are looking for are lessons learned that exist in other agencies, and it shouldn't be in a void not only in what DHS is about, but what they could learn from other independent agencies or DOD or DOE.

That is what we have been encouraging, that kind of dialogue not only with industry but across intra-Government so that so that you can learn what the processes are within a Department that is 8½ years old. The evolution is continuing, but we need to kind of move forward and stop saying we know it all, we have got it all

down and fighting the last war. It is giving industry and Government an opportunity to look ahead of the curve.

Mr. McCAUL. Thank you. Just to follow up. Mr. Pearl, you talked about leveraging existing technologies rather than just starting from scratch. SBInet is a good example of that. I took Barkowski, who does a lot of the procurement in science and technology, Henry Cuellar and I took him down to the border, and because the Defense Intelligence Agency had sensor surveillance equipment that had already been produced, the R&D had been paid for by the taxpayer, they are using this actually currently in Afghanistan on the Pakistan border, sensor surveillance technology. Yet it is classic Federal Government, the left hand doesn't know what the right hand is doing. We had to make that introduction to him and brought him down on the border. He looked at what the DOD had to offer and he liked it. He is starting to procure it and deploy it.

But that is just I think one example of technology that exists within the Federal Government that is not being leveraged. But then you look at the private sector, too. There is so much of this technology out there that is not—existing technology that is not being properly leveraged, in my view. I think the end result is not only can you be more effective and it can be deployed more quickly, but it is also more cost-effective from the standpoint of the taxpayer.

Mr. PEARL. You would think that. That is what we certainly in the private sector and what Mr. Williams and I are talking about, this dialogue is absolutely necessary. One of the things that the Council is going to be doing later this fall is bringing a group on a kind of fact-finding, executive tour mission down to the Southwest Border. We have developed not only relationships with DHS to develop this kind of dialogue, but we are bringing DOD and North Command into what is going on, U.S. Army North, and working very closely with Commanding General Swan, and try to get—you know, they kind of talk. But to be, you know, that kind of triangulation of making sure that the DOD and the DHS and the industry are all in the same room talking about what those future plans are, whatever leveraging we can do for tech services, for technology, for personnel, across the board. I think everybody wants to be there to help, they are all just kind of doing it on their own and we have to kind of develop that more in a coordinated, communicative, collaborative way.

Mr. McCAUL. Mr. Williams.

Mr. WILLIAMS. I would just say, Congressman, I think what you are talking about is strategic sourcing, which is how do you leverage that buying power, leverage what is already out there. DHS has way too many of the same people buying the same thing but at different components. Whether it is buying it—getting it from Department of Defense or just combining their buying power or combining their vehicles with other Government vehicles, they don't do enough of that. I think that is true across the Government, but particularly DHS, which has not really formed a cohesive whole as a procurement organization. They are a bunch of different stovepipes. I think they need to find a way to establish the processes that bring them together so that they can leverage the existing technologies from the private sector, existing vehicles and tech-

nologies that exist within DHS and across the Government. I would say if I had to guess what percentage of DHS's budget that they strategically source that they could, I would say it is less than 1 percent, that they could do something better about that other 99 percent.

Mr. MCCAUL. Well, I certainly hope—I know someone at the Department is watching this hearing and I hope they are listening. These are great lessons to be learned, and I think it would make DHS more effective and it would save the taxpayer a lot of money. Thank you for your interest in this, your hard work. I think this is an area that needs a lot of improvement, and I look forward to working with all of you.

With that I yield now or recognize the Ranking Member.

Mr. KEATING. Thank you, Mr. Chairman. I am a big believer in pilot projects as well. I actually saw Homeland Security implementing one in Logan Airport which was terrific. It was an optical project with Lincoln Laboratories, MIT, and Northwest Pacific. Just looking at them deal with this pilot project, which is going to really I think improve digital camera surveillance and revolutionize it.

With that being said, do you think there is enough interest? You know I would think just intuitively that in the front end for businesses to engage in pilot projects it is pretty intense in terms of commitment to capital, commitment to resources. Do you get a sense that there would be a lot of interest and create a lot of competition and diversity of vendors if we had more of a pilot project approach, or would it be more costly, because you are putting in so much research without the sense that you are going to be able to actually go beyond that?

Mr. PEARL. Let me just briefly say that I think the pilot project, that has been a part and parcel of what homeland security has been about for 8½ years, which is, in many instances, the sense of piloting and trying to kind of figure that out. It is my impression from talking with both the Chairman and the Ranking Member of the full committee and others in Congress, that earmarking and pilot projects are not really the rule of thumb these days given the economics of what is going on. So what industry might want to invest in is different from what Congress can appropriate and what the administration can invest in as well. The flip of that is, is that if we are building any pilot project, if any of our companies are doing that, and yet we don't know on our own what in point of fact they are looking for, then in point of fact even if it was successful it may not be eventually implemented or deployed.

I really do feel Dr. O'Toole's frustration, something that we have talked about. We are engaging in greater dialogue both with the Under Secretary of Management and the Under Secretary of S&T. Her frustration is no different than the 11 acquisition different processes, which are the multitude of S&T and R&D projects that are going on in the various components.

TSA, all the great stuff that Administrator Pistole is doing, he will do it on his own, he will not do it necessarily in coordination with the broader S&T because he either has his own funds or he has his own way of looking at it and then goes back to S&T and may say can you approve this. So if you are working with Tara

O'Toole on a pilot project in the airport it may not be something TSA is looking at. That is why we are encouraging—this is not just communication between industry and Government, this is communication within Government, and that we think that there needs to be this greater dialogue. If we in industry can help facilitate that, whether it is between DOD and DHS or between the various component parts, we want to do that. I do know that the Under Secretaries both, Rafael Borrás and Tara O'Toole, are encouraging that kind of greater dialogue. They are trying amidst whatever the budget situations are to try to develop a better policy and procedures process.

Mr. AMEY. From an oversight perspective I would say I don't have a problem with pilot programs as long as it is open, transparent, there is a level playing field, you do also open up some legal issues with intellectual property rights on who holds them, whether it is the Government, whether it is the individual contractor, and that has created a multitude of problems for the Department of Defense through the years that at the end of the day they R&D funded a project and then it was—or there wasn't a lot of competition after the fact, so in essence it was an indirect earmark that went to a specific contractor, or the requirements are so narrowly tailored based on that technology that at that point competition won't amass because people aren't going to compete because they know where that is being steered to.

Mr. KEATING. Good point. Mr. Williams.

Mr. WILLIAMS. I would just say I am very much in favor of pilot programs. I think you can look at it from about three different ways. One is doing a pilot of emerging technology where you just want to try it. For example, if there is something that works great in cybersecurity mode allow the Department to have the flexibility, which I believe they have, they just don't exercise it, to try something on a smaller scale. I think there is also a pilot before you are going to implement a large-scale system, which I have done, having a pilot as part of the testing not only lowers the risk of full-scale implementation, it allows you to better understand the program cost. The most expensive is actually to go into a fly-before-you-buy pilot with multiple pilots, that is expensive. But on some of the larger systems of DHS that might actually be appropriate.

So I think they have to have a better culture of understanding when pilots should be used and how to use them properly, but I absolutely think they ought to do more of that.

Mr. KEATING. I like to follow this up from time to time, but the day has been really broken up, and I apologize to all of the panelists who had to wait through that. I look forward for the opportunity in the future to have future discussions because I do think this is extremely important. I think we have an agency that was born of so many diverse parts it is still struggling for some kind of fusion. If we can work together to improve that, everyone will be benefited, not just in terms of taxpayer funds but also in terms of our security.

So I would like to follow this up. I do apologize for the day being so broken up.

Mr. MCCAUL. Thank you. The Chairman now recognizes the gentleman from Michigan, Mr. Clarke.

Mr. CLARKE of Michigan. Thank you, Mr. Chairman. I also thank both of you for this hearing and allowing me to be here today. I was looking at several GAO reports, and I think there was one back in 2008 that indicated that one of the best ways to guard against cost overruns and scheduling delays is to have clear requirements and to have clear performance measures in order by which to evaluate the performance of the contractor.

Now, with DHS contracting generally it is unique and it is complex just in terms of its mission. Service contracting, especially in the area of technology, is extraordinarily complex. On top of it, when you look at what our goal is, to fight terrorism, to protect our people, to prevent these attacks from happening and to be able to respond to them when they do, the threat is constantly evolving and changing. So the way that we meet that threat has to change the same way, with speed.

So some of you had some criticism about the early deployment of certain technologies. I could understand why. For example, when we now know that the terrorists are now considering using radioactive materials to harm us on planes, and I think the French actually developed some technology recently that we were talking about that could help screen against those kinds of materials, that the Department would immediately want to get on it because we have to act quickly. So I can understand that. We may even have to act more quickly than the Department of Defense.

I have got several questions. Let me just lay it out. First of all, with technologies that are evolving to meet an evolving threat, everything is moving around, what I have heard is that we need to better engage the private sector in this, because definitely our S&T Directorate, that funding is being cut so we aren't going to be able to do that in-house. But that will be another policy decision that, if I could, Mr. Chairman, again, I said repeatedly time and time again, the best way to protect American citizens is take a share of the Afghanistan security fund assistance of \$12 billion or so and redirect that to homeland security so that we can have the resources that we need. But I am not going to make a political issue about that, but I do want to raise that point.

We don't have the staff and resources funded by tax dollars to do this research, so we have got to rely on outside partners like Dr. O'Toole talked about. Mr. Pearl raised this issue I think a few years ago. So we need early engagement from those that are developing this technology or are at the cutting edge of it. How do we best do that regarding a specific, let's say, procurement? We are not talking about a general access issue now to introduce like a technology. But on a specific procurement, without raising the conflict of interest issues that DHS is very mindful about, which could be a reason why they may not respond many times to a private contractor or why they may not even want to respond directly through an inquiry from a Member of Congress, so they aren't being perceived as being swayed by outside pressure, because one of the major contracting principles is we have got to have a fair process because we are using tax dollars.

So that is one question, is how do we balance the need for early engagement so we can get the input in shaping the requirements of the technology that we need to acquire, because we probably

don't know what that is, that is why we need information on it, because we are not really sure what our threat maybe is, we have an idea, and then how do we do that without running into issues that this is somehow wiring the contract to a certain contractor.

Mr. PEARL. If I may, I think that is an important question, Congressman Clarke, but maybe to phrase it in a different way. It is not how do we leverage an emerging technology or how do we utilize a particular product. I think that the question from Congress, not to tell you how you should ask the question, but the question should be, what are we trying to achieve, what is the goal, what is the mission of that particular program, of that particular utilization? From that, once that question is asked precisely by Congress or by the Department or even by industry, what are you trying to achieve in airport detection, in border or whatever, then bring before the procurement, before the RFP, bring the industry together with the people, with the folks from the Department, to talk about how are the various component parts made up so that in essence people will know whether their technology or their service or their product or their widget is the best one, the best to bring. It shouldn't be we have decided that we are going to use this technology and therefore everybody bid on it, whether it is facial recognition or whatever. So the question should be, what are we trying to accomplish and what are the capabilities that the Government brings and what industry brings to accomplish that goal?

With respect to the global aspect that you raised, that is easy, because some of these things have been deployed in other countries, and that is a pilot project unto itself. It may not be able to be Nationalized if it was used in Israel or if it was used in Germany or if it was used in Spain, but lessons learned there is a perfect pilot program, Congressman Keating, that has been utilized and let's see if we can in essence transpose that to the United States.

So there are different ways in which we should be part of a dialogue that gets to exactly what your question I think is about.

Mr. WILLIAMS. If you don't mind, Congressman Clarke, I think the answer is fairly easy. I had, when I was in Government, thousands of acquisition personnel working for me and talking about open communications. I say if you were building a house and you wanted multiple suppliers, would you at some point in time do what the Government does, start with some communication and the closer you got to forming a contract shut down that communication more and more? No, you would open it up more and more. The way the Government should go about doing this is very easy, engage the private sector in ways that is both open and fair, and it can be done. Start with the general idea of what is the mission goals and talk to industry about that, get some feedback. As you go through this iterative process of communication you start to learn more as a Government buyer what is the art of the possible from the private sector. Once you get closure to know what those requirements are you put those requirements out there and the acquisition strategy to see how well that matches up with the private sector.

It is not that hard. It is just a matter of taking a philosophy of communicating throughout the process in order to best match up

the Government's needs with what the private sector can offer that is most cost-effective and efficient. It is not that hard.

Mr. CLARKE of Michigan. Is this a sense then that we have got to change the culture of DHS or are there certain policies that we need to modify to create the right incentives for open and transparent communication.

Mr. WILLIAMS. I would just say that culture of not communicating openly is across the Government. I think with DHS in particular DHS is still a collection of too many disparate organizations that don't act as one. Now, we would want them to act as one and raise the bar on how they engage industry. They don't do that.

Mr. CLARKE of Michigan. Now, let me just follow up just on that in terms of having a comprehensive acquisition process. Now, my assumption is that all the component parts of DHS, they all are subject to Federal acquisition regulation. Like some parts, like the Coast Guard, TSA now I think is even under the FAR when it used to be under FAA I think when it was a stand-alone agency. But anyway, my point is this: Do we need to make any statutory changes to unify the acquisition process for all the parts of DHS?

Now, what I have heard is that the Coast Guard may still follow the FAR, but some of their procedures may be different than other DHS agencies, but that it may provide more flexibility. But I am not sure of that. This is anecdotal information I have got. So are there real differences, should those differences be eliminated and we kind of unify procurement and acquisition procedures, and then finally if that is the case do we need some type of statutory change where this body would come into place.

Mr. PEARL. I would just say, I am certainly not here to ask for new laws or new regulations. What I would be looking for is should the Congress and this committee, overall committee, look at once and for all the value of a comprehensive authorization bill which gives the kind of blueprint from at least the Congress' priorities to DHS, rather than always only of giving the guidelines to the Department through an appropriations process. If it is only in report language of an appropriations bill, then therefore they are not getting the kind of guidance that they might want and they need in order for us to get the blueprint that we were talking about. So I am not talking about anything statutorily, I am just simply saying that if Congress has priorities on mission it might want to look at more closely a more comprehensive authorization approach, which comes out of this committee, versus an appropriations approach and only doing it through appropriating report language.

That is one aspect. It doesn't go to the statutory, but gives guidance that might be helpful as part of the blueprint that we are talking about, and would urge the Department to in fact get us to a point that we would all like to be at.

Mr. CLARKE of Michigan. Could that comprehensive authorization bill then contain that acquisition strategy that we are looking at, the long-term acquisition strategy for DHS?

Mr. WILLIAMS. Congressman Clarke, I am not sure a new law is needed here. I think there are a lot of plans, such as the OFPP memorandum on myth-busting on open communications. I think Dr. Nayak has plans. There are many procurement people there who work very hard, but I think they have too much fear of engag-

ing the private sector. They often attribute it to things like, well, it is their misinterpretation of the rules, it is the fear of oversight groups telling them they are doing something that is unfair, it is a fear of protest, which I always find remarkable, because my experience was the more that you engage the private sector in a very open and transparent and competitive way the more you do not get protest.

So I am not sure any new law is necessary. I think it is a matter of them simply changing their culture and implementing some of the plans they already have in place.

I will say I would love, and TechAmerica would love, to see the vendor communications plan that they are supposed to have delivered to OMB for review on June 30 to see really how far-reaching that is so that TechAmerica could provide some best practices suggestions for how to improve the engagement with the private sector. Again, this engagement with the private sector is not simply just because we want people to talk to us, it is because we think we can help the Department better accomplish their mission in a more cost-effective manner.

Mr. MCCAUL. We can tell the gentleman has experience in this issue and I appreciate your insight and wisdom.

Mr. CLARKE of Michigan. Can I just—

Mr. MCCAUL. The Ranking Member has a flight at 2:30, so being mindful of that—

Mr. CLARKE of Michigan. I would like to know if I can meet separately with you. Because again, a lot of the protests arise from when you don't have clear requirements in the first place. Then second, all the good will, the good discussions, the memos, the GAO reports, everything is leading to one point. I would like for us now maybe to consolidate this. This body can actually drive that to happen. If it is something we can do to give DHS the freedom that they need not to be fearful of talking to people, we could provide that.

But also too one last point, you know, I have heard time and time again DHS acquisition personnel, they need the training, we need the funds to train the people, we need more acquisition personnel, that would take the burden off of that, that would allow other personnel then to respond to inquiries from contractors, from Members of Congress. It is not just money, but it is how we use it. That is why I urge you, Mr. Chairman, and your caucus to consider fully funding DHS's operations right now.

A lot of the problems that we are hearing is if we had more qualified people with the right attitude, all these problems I think would vanish.

Mr. PEARL. Simply put, I would just encourage both the continued dialogue, not only with the Department, but as we have done, certainly the Council and I am sure TechAmerica has done, with the individual Members of this committee and with the subcommittee as well. We continue to want to be in dialogue with you so that you know exactly what the concerns are and whether we facilitate or you facilitate or the three, you know, with the DHS in the room. It shouldn't always be only at a hearing process, it has to be an on-going dialogue that we all in fact want to engage in and continue the work of the oversight of this committee.

Mr. McCAUL. Well, I look forward to continuing that conversation with you both in this setting, also more informally in the office, you have some great ideas.

Before I adjourn I do want to enter into the record your report, Mr. Pearl. Without objection, so ordered.

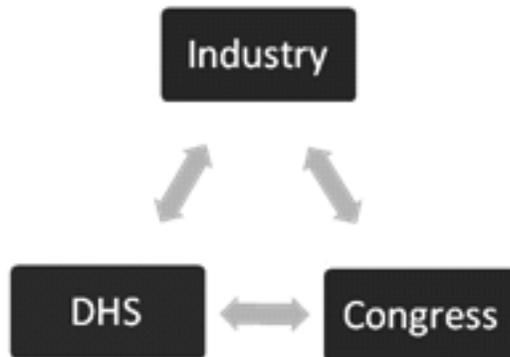
[The information follows:]

REPORT OF THE HOMELAND SECURITY & DEFENSE BUSINESS COUNCIL SUBMITTED BY
CHAIRMAN MICHAEL T. McCAUL

COUNCIL PRINCIPLES ON FEDERAL CONTRACTING AND PROCUREMENT: HOW DO WE BEST
ACHIEVE STRATEGIC ALIGNMENT BETWEEN INDUSTRY AND GOVERNMENT?

The Homeland Security & Defense Business Council was formed to drive awareness, understanding, and dialogue among those responsible for supporting the security of our Nation. The Nation's leading companies engaged in providing the products, technologies, and services solutions to the homeland security marketplace participate in the Council. We are committed to creating a strong public-private sector business process and substantively engaging the leading executives in industry and Government to meet the Nation's homeland security requirements.

Since the creation of the U.S. Department of Homeland Security, the Council believes that we have not yet optimized and operationalized the relationship between the public and private sectors in order to sufficiently leverage industry's full resources to meet the needs of the Department and the Nation. For example, the lack of a predictable homeland security acquisition environment hampers industry's ability to anticipate Government needs and efficiently marshal resources to meet them. This and other differences in perspective between Government and private industry prevent our Nation from achieving our security objectives in the most effective way possible.



**Optimal Alignment: Transparent
Communication & Information Sharing
Among Stakeholders**

The Council and its members desire to develop a forum to promote a substantive and open dialogue between the Department and industry that will help us align our activities to strengthen support to the DHS mission and our Nation's overarching homeland security requirements. Optimally, Congress should also become a full participant in those aspects of the dialogue that require legislative oversight. Possible discussion points that will help "jump start" a dynamic and healthy dialogue are outlined below. Government leaders will likely have additional topics of interest, which can also become part of the discussion.

DISCUSSION POINTS

Need for a Mid- and Long-Term Strategic Plan That Would Provide Industry With the Ability to Align Its Resources to the Mission Goals of the Department

Industry makes business, planning, and investment decisions based on developing and growing long-term capabilities. The U.S. Department of Homeland Security strategic plan would allow industry to align its resources and investments to meet the longer-term goals and needs of the Department. Lacking such a strategy severely limits the ability of interested companies who want to respond to the Department's needs and limits industry's investment in the homeland security mission area. The Department should also consider its influence on companies that service the State and local market. Many of these companies tend to be small, privately owned entities with limited resources who are funded through DHS grant dollars. A focused strategy should reflect requirements that can be passed down through procurement documents to ensure service and product providers offerings are in line with DHS's global mission.

- Develop a mechanism, or clear “rules of engagement” that would allow industry input in an open, transparent manner.
Industry is ready and able to engage to meet the opportunities and challenges within the Department; however, all participants must understand and adhere to “rules of engagement” that optimize input and exchange between the public and private sectors. The more complex the procurement, the more critical is the need for an open information exchange. Industry input is essential to help refine and calibrate requirements to match mission objectives and achieve mission goals.
- Improve the efficacy of the procurement planning process to optimize the private sector's ability to respond.
Industry needs planning time to align its resources in order to effectively and adequately respond and to assure its capabilities meet and exceed the Department's requirements. Developing a mid- and long-term strategic plan would offer industry more lead time so that the Department receives the highest quality bids or options.
- Continue to Standardize and Rationalize the Acquisition and Procurement Process.
Continue to utilize Department-wide vehicles. Combining almost 2 dozen agencies with different processes and cultures to form a new Department has resulted in many different operating missions and cultures. This is particularly challenging for small companies that bring innovation and capability, but lack the marketing resources to operate across disparate functions within an organization. This disadvantage is magnified when having to compete against large entities with sizable marketing teams focused on each agencies organization. For industry to provide the best products, technologies and services to the Department, we strongly support a strategy leading to a more centralized standardized process.
- Recognize and address the need for a higher quantity and quality of contracting personnel who understand the “rules of engagement” well enough to communicate both pre- and post-award.
A procurement or acquisition experience is often as good as its contracting officer. In many members' experience, the more senior contracting officers tend to provide maximum interaction. These senior officials communicate more openly and add to a constructive “back and forth” between Government and industry. The lack of contracting officers in general, has complicated and frustrated both potential and winning contractors. Additionally, without adequate understanding of the appropriate interaction between industry and Government, contracting officers without experience tend to err on the safe side and have no interaction at all. This severely hampers the process and outcome of many acquisitions and procurements.
- Address issues and complications surrounding the security clearance process.
As everyone involved in the security clearance process recognizes—the lack of standardization and reciprocity among DHS components causes significant delays, impacts award fees, and project performance. Consider in the context of small businesses that the cost of multiple clearance processes becomes prohibitive and the agency loses the ability to transfer best practices, technology, and talent across multiple organizations. A uniform reciprocity should be developed for internal DHS components.

Optimizing the Dialogue

- Leverage private sector resources to help achieve mission success—aligning the administration’s mission with Congressional concerns and with industry capabilities.

Industry understands that it engages and operates in an environment where both operational and political considerations alter the course of events. The Council supports developing an open, free-flowing dialogue between the Department, the Congress, and industry that discusses how to better prepare for our role in the defense and protection of our Nation’s people, facilities, borders, and networks. This dialogue should expand beyond the Federal contractor community into local business organizations that can influence community behavior in line with National interest.

Participate and Support Programs to Encourage and Enhance Mutual Understanding and Cooperation

In addition to the initiatives outlined above, the Council is interested in working with DHS in developing an exchange program to improve the management abilities and technical and professional competencies of DHS employees. A professional exchange program would offer the Department first-person insight into the philosophy, procedures, and practices of industry. The exchange would also offer public sector professionals an opportunity to fully examine industry policies and processes, as well as learn first-hand, how industry addresses contracting and procurement issues—acquiring the ability to interpret the needs of the Department in industry terms. By studying the best practices of industry, Government professionals are able to bring new knowledge, understanding, and empathy back into the Department to then improve its processes. Obtaining such direct insight and experience is currently unavailable in DHS. The process is also extremely beneficial to industry, which in turn receives the unique perspective and experience of the DHS professional.

Mr. MCCAUL. Thank you for your testimony. Members may have additional questions, and I would ask that you respond to them if they are tendered to you in writing. Great hearing, and thank you so much for being here. This subcommittee is adjourned.

[Whereupon, at 1:50 p.m., the subcommittee was adjourned.]

APPENDIX I

LETTER FROM RAFAEL BORRAS AND TARA O'TOOLE

JULY 21, 2011.

The Honorable MICHAEL MCCAUL,
Chairman, Subcommittee on Oversight, Investigations, and Management, U.S. House of Representatives, Washington, DC 20515.

[The Honorable WILLIAM KEATING,
Ranking Member, Subcommittee on Oversight, Investigations, and Management, U.S. House of Representatives, Washington, DC 20515.]

On Friday July 15, 2011, we testified before the committee and due to time constraints, many concerns raised in the opening statements were not able to be addressed. We wanted to take this opportunity to share with you the progress that has been and continues to be made with regard to leveraging technology and the Department's programs in securing the border, and to correct the reported errors regarding the Department's Advanced Spectroscopic Portal (ASP) Plan.

As was stated in the hearing, DHS is highly focused on leveraging research and development investments made by the Federal Government, the commercial sector, or universities. As part of its recent organizational realignment, the Science and Technology Directorate created the Research and Development Partnerships Group, which reports directly to the Under Secretary, to focus our "technology foraging" efforts. As an example of our many interactions with DoD, Under Secretary of Defense for Acquisition, Technology, and Logistics Dr. Ashton Carter, DHS Under Secretary for S&T Dr. Tara O'Toole, and DHS Under Secretary for Management Rafael Borras meet quarterly under the Capability Development Working Group. This group explores capabilities of mutual Departmental interest, decides on appropriate implementation paths that avoid duplication of effort, and informs policy, planning, and decision making. Under Secretary O'Toole also co-chairs the White House Office of Science and Technology Policy's Committee on Homeland and National Security with Assistant Secretary of Defense for Research and Engineering Zachary Lemnios. The committee and its subcommittees, consisting of agencies across the Federal Government, collaboratively develop executable research and development plans.

It is critical in these efforts, however, that the existing technologies line up with DHS's operational requirements. Part of the problem with past acquisitions has been the attempt to insert off-the-shelf technologies, designed for different missions, in to DHS programs without a careful comparison to DHS's specific operational needs. The shared focus of the Under Secretary for Management, the Under Secretary for Science and Technology, and Secretary Napolitano on leveraging S&T in the "front end" of acquisition is targeted specifically at ensuring that DHS either selects the proper off-the-shelf technology when it exists, or receives the technology through a disciplined research, development, and acquisition process.

As you correctly noted in the hearing, the Secure Border Initiative was started in 2006. This was before the current management controls were put in place, specifically Acquisition Management Directive 102-01. Directive 102-01 was signed by then-Under Secretary Elaine Duke in January of 2010. In July of 2010, the troubled SBInet program was directed to present a revised Analysis of Alternatives (AoA) in accordance with Directive 102-01 that re-examined the operator's needs. This rigorous analysis and mandatory engagement with the field operations resulted in a much more rational technology plan that includes proven elements of the former SBInet program while better utilizing off-the-shelf solutions. Through our management controls, we directed the suspension of SBInet, forced a re-plan of border security technology, and supported a new plan to increase operational coverage and provide deployment flexibility that was not present in the prior program plan.

Regarding the recent *Washington Post* article, we want to point out some key items that the newspaper story did not cover. First, Advanced Spectroscopic Portal

monitors, or ASPs, have been tested and subject to review and evaluation for over 3 years. These test data were used to inform a decision on whether to go forward with acquisition and deployment activities. In April of 2011 the Department held an Acquisition Review Board (ARB) on ASPs. The ARB directed the Domestic Nuclear Detection Office (DNDO) and Customs and Border Protection (CBP) to pursue a revised program that addresses limitation in cargo conveyance scanning technologies based on the Model-Test-Model approach recommended by the National Academies of Science. This revised program was directed by the ARB to include commercially-developed systems and an analysis of alternatives. Finally, the most recent ASP contract expired on July 11th of this year—there is no more existing contract to purchase radiation monitors today, nor will there be until such time that a new set of requirements is developed by DNDO and CBP, and approved by the Department's ARB.

We acknowledge that many of the Department's legacy programs have faced challenges that both the Office of the Inspector General (OIG) and the Government Accountability Office (GAO) have repeatedly commented on; however, even the OIG noted in its recent June report (OIG-11-91) that significant progress has been made in maturing the Department's acquisition process and program management capabilities. In fact, the report notes that the Department has implemented all five recommendations to enhance oversight, established and strengthened the Department's Acquisition Program Management Division, and addressed procurement staff shortages and staff authority.

We thank you for your support of the Department of Homeland Security, and an identical letter has been sent to [Chairman McCaul] [Ranking Member Keating]. If we can be of any further assistance, please contact us.

Sincerely,

RAFAEL BORRAS,

Under Secretary for Management.

TARA O'TOOLE,

Under Secretary for Science and Technology.

APPENDIX II

QUESTIONS FROM CHAIRMAN MICHAEL T. MCCAUL FOR CHARLES K. EDWARDS

Question 1. You mention in your testimony that components are not consistently reporting their acquisition programs to the Department. You further state that components have developed, or are in the process of developing their own data-tracking systems for acquisitions because the Department has not mandated the use of the Department-wide system. For example, Customs and Border Protection (CBP) was in the process of developing an additional database to track acquisitions.

What was CBP's rationale for building its own acquisition database?

What measures is the Department of Homeland Security (DHS) taking to ensure that the Department is not wasting dollars on multiple acquisition systems tracking the same information?

Answer. The Department of Homeland Security (DHS) continues to face challenges associated with implementing a fully integrated acquisition function. In Audit Report OIG-11-71, "DHS Oversight of Component Acquisition Programs," we found that the Department developed inconsistent reporting requirements for components to follow when reporting an acquisition's progress in the Department's standard reporting system. The standard system is an integrated system that provides visibility to the Department to track components' level 1, 2, and 3 acquisition investments. We recommended that the Department direct components to report all acquisition programs (level 1, 2, and 3) to the standard system. We are still waiting for the Department's final reply on the recommendation due to its reorganization of its acquisition offices, but we believe that once the Department ensures that all components are reporting the acquisition program data into the standard system, the Department will have visibility over acquisition programs.

The Department has identified the standard system that all components will use to report acquisition programs. The Department of Homeland Security Management Directive 0007.1, "Information Technology Integration and Management," establishes the Department's vision and the authorities and responsibilities of the Department's Chief Information Officer. It reinforces the commitment to create and manage a unified department in mission accomplishment and support systems performance. Within the Department, component heads and line of business chiefs share the responsibility of developing information technology to build a progressive 21st Century DHS. Dual accountability recognizes mission accomplishment as the ultimate responsibility of the component heads and requires them to support functionality. According to CBP, it was developing its own acquisition system because it did not believe that the standard system would provide the appropriate level of security.

Question 2. In your testimony you state that the Department does not always know what is in its acquisition portfolio because the Under Secretary for Management (USM) has not ensured that components report all acquisition programs. As a result, the USM does not have visibility to conduct oversight of acquisition programs.

Does the USM need additional authority through legislation to make sure the Department has proper visibility of all acquisition programs?

Answer. As stated above, we believe with the implementation of our recommendation, the USM will have visibility over all components' acquisition programs. One additional suggestion to enhance the USM's authority, however, would be to give the USM authority to override funding if a component acquisition program is not meeting all of the requirements of acquisition life cycle management.

Question 3. According to your testimony, there seems to be a recurring theme that Department-wide, components are maintaining separate inventories of their technology equipment, not effectively leveraging existing technologies, and not imposing standardization of technologies across DHS.

What steps are being taken to standardize the inventory of technology and to increase coordination and communication so all components and the Department are aware of what other components are purchasing?

What additional efforts are needed to standardize equipment purchases and identify common mission requirements among components?

Answer. In our report OIG-11-47, *Department-wide Management of Detection Equipment*, we found that the Department can improve management of its detection equipment by using strategic sourcing principles that it has applied to the acquisition of other commodities, such as law enforcement officer firearms and ammunition. The Department does not have a logistics process in place to facilitate strategic sourcing of detection equipment. Strategic sourcing would require that management standardize equipment purchases for explosive, metal, and radiation detection equipment; identify common mission requirements among components; and develop standard data elements for managing the inventory accounts of detection equipment. Improving its management of detection equipment will offer the Department opportunities to streamline the acquisition process and improve efficiencies. These same principals can be applied to other commodities across the Department such as tactical communications equipment.

Question 4. In your testimony you state that all components do not have adequate policies and procedures in place to manage their acquisition programs.

Why has the Department given components decision authority to manage certain acquisitions when they do not have adequate policies and procedures in place to manage these acquisition programs?

When do you expect these policies and procedures to be in place?

Until components have sound policies and procedure in place, who is currently managing them?

Answer. In Audit Report OIG-11-71, "DHS Oversight of Component Acquisition Programs," we stated that although the Department delegated the responsibility of the management of level 3 programs to the components (retaining level 1 and level 2 control), the Department did not take steps to ensure that all components developed prescribed policies and procedures for oversight of acquisition programs. DHS Acquisition Management Directive 102-01 states that components retain authority to set internal acquisition processes and procedures, as long as they are consistent with the spirit and intent of the directive. However, not all components have created such policies and procedures, and the Department had not taken steps to ensure the adequacy of the processes and procedures that components developed. We reviewed the component policies and found that four components had created and issued finalized policies, five had draft policies, and three did not provide a policy. We recommended to the Department that it implement a plan of action or completion deadline for Department-wide finalization of acquisition management policies and procedures. We are still waiting for the Department's final response on this recommendation.

QUESTION FROM CHAIRMAN MICHAEL T. MCCAUL FOR DAVID C. MAURER

Question. Some in the private sector believe that there is a lack of communication and cooperation between DHS components and the Department. As a result, technologies are not effectively leveraged and duplication of efforts occurs.

What specific measures do you recommend that will improve their coordination efforts?

Answer. In order to improve Department-wide coordination efforts, leverage technologies more effectively, and reduce duplication, we recommended in November 2008 that DHS should reinstate the Joint Requirements Council (JRC) or establish a similar body responsible for overseeing requirements Department-wide.¹ Established in 2003, the JRC was a senior requirements review board responsible for identifying certain crosscutting opportunities and common requirements across DHS components, and helping ensure that the Department used its resources wisely and in the best interest of the American public. However, the JRC stopped meeting in 2006 after the Chair was assigned to other duties within the Department. The JRC played a key role in identifying overlapping DHS investments, and in 2008, DHS officials recognized that since the JRC stopped meeting, there had been no direction for requirements or oversight of certain investments at the Department level and stated that strengthening the JRC was a top priority. DHS agreed with our recommendation to reconvene the JRC or a similar council, but it has not yet done so.

¹ GAO, *Department of Homeland Security: Billions Invested in Major Program Lack Appropriate Oversight*, GAO-09-29 (Washington, DC: Nov. 18, 2008).

We also reported in June 2010, that DHS's senior-level Acquisition Review Board (ARB) has begun to meet more frequently and has provided programs decision memorandums with action items to improve performance.² At the time of our review, the ARB had reviewed 24 major component acquisition programs in fiscal years 2008 and 2009; however, more than 40 major acquisition programs had not been reviewed, and programs had not consistently implemented review action items by established deadlines.

In June 2011, DHS reported that it planned to create the Capabilities and Requirements Council which would serve in a similar role as the JRC. DHS reported that it will form the new council in the fourth quarter of 2011, but it is unclear when it is expected to become fully operational. DHS also reported that it plans to establish a new model for managing and coordinating Department-wide investments across their life cycles. Under this plan, the Science and Technology Directorate (S&T) would be involved in each phase of the investment life cycle and participate in new councils and boards DHS is planning to create to help ensure that test and evaluation methods are appropriately considered as part of DHS's overall research and development and investment strategies. In addition, DHS reported that the new councils and boards it is planning to establish to strengthen management of the Department's acquisition and investment review process would be responsible for, among other things, making decisions on research and development initiatives across components based on factors such as viability and affordability and overseeing key acquisition decisions for major programs using baseline and actual data. According to DHS, S&T will help ensure that new technologies are properly scoped, developed, and tested before being implemented.

The actions DHS reports taking or has underway to address the management of its acquisitions and the development of new technologies are positive steps and, if implemented effectively, could help the Department address many of these challenges. However, showing demonstrable progress in implementing these plans is key. In the past, DHS has not effectively implemented its acquisition policies, in part because it lacked the oversight capacity necessary to manage its growing portfolio of major acquisition programs. While we support DHS's efforts to develop councils responsible for overseeing requirements Department-wide and coordinating programs, it is not yet clear how the new DHS councils will perform their functions. It is too early to tell whether it will meet the intent of our past recommendation, improve coordination between the Department and its components, and continue to function effectively over time. We will continue to assess these efforts as part of our on-going work related to DHS technologies and acquisition management.

QUESTIONS FROM CHAIRMAN MICHAEL T. MCCAUL FOR RAFAEL BORRAS

Question 1. The SBInet program has been terminated. What went wrong? How can we apply the lessons learned from this program's termination to any future acquisition program?

Answer. The SBInet program has been terminated, due to not being the most efficient, effective, and economical way to meet our Nation's border security needs. SBInet suffered a series of technical issues that led to significant schedule delays and cost overruns, resulting in the inability to deliver a cost-effective solution. The capabilities already fielded through the SBInet program will be utilized to support the efforts of Customs and Border Protection (CBP) to identify and reduce threats and illegal cross-border activity.

We have learned from this program and others with similar issues that the Department's acquisition management framework needs to mature through the refinement of our policy, processes, procedures, and placement of people with the right skill sets in the program offices. The goal is that every major program is implemented in the most responsible and efficient manner possible. To achieve this, we have taken steps to strengthen acquisition management through the implementation of Management Directive 102-01, Acquisition Management (MD 102-01). This document establishes the overall acquisition management framework for all major acquisition programs. It formalizes the role of the Acquisition Review Boards (ARBs) in the oversight and governance process, as it assesses a program's progress and determines the criteria for further execution. The implementation of this directive has resulted in productive interactions between program offices and Department leadership allowing us to mitigate or avoid cost, schedule, and performance risks.

Subsequent to releasing the MD 102-01, we established the function of the Component Acquisition Executive (CAE), a senior acquisition official within each Compo-

²GAO, *Department of Homeland Security: Assessments of Selected Complex Acquisitions*, GAO-10-588SP (Washington, DC: June 30, 2010).

ment who leads a process and staff to provide acquisition and program management oversight, policy, and guidance to ensure statutory, regulatory, and higher-level policy requirements are fulfilled. We intend for each Component with acquisition programs to designate a CAE, who will be delegated acquisition decision authority for the Component's level 2 acquisition portfolio (programs with total life cycle costs between \$300 million and \$1,000 million).

Question 2. In your testimony you discuss an Integrated Investment Life Cycle as an end-to-end process that integrates strategy, resources, and capabilities. Please describe this process and how this will improve acquisition management and save taxpayer dollars.

Answer. DHS continues to enhance our enterprise-wide acquisition framework as a key element of integration strategy. In fiscal year 2010, acquisition management represented nearly \$18 billion of the Department's \$55 billion budget. We have made progress in evolving acquisition management by refining our acquisition policy, processes, and procedures, particularly the "front end" planning and the "back end" program management phases to operate more seamlessly. Our goal is to have a disciplined oversight processes, Integrated Investment Life Cycle, that will improve DHS by ensuring our major acquisitions are effectively managed in order to maximize the value of every homeland security dollar.

The Integrated Investment Life Cycle establishes a holistic view of how investments should be managed. DHS will improve the investment effectiveness at the "front end" by providing better linkage between requirements development, resource allocation, procurement, and program management. The model strengthens the "front-end" in a strategic phase with the involvement of the Department Strategy Council (DSC) and the Capabilities and Requirements Council (CRC). The DSC sets strategic direction, ensures mission needs are consistent with the strategy and provides overall programming guidance using the Integrated Planning Guidance (IPG) process. The proposed CRC rationalizes and harmonizes Department-wide capabilities and makes tradeoff decisions to inform Component and Department-level budget submissions. This structure will ensure that decisions are made to achieve our mission needs and to fulfill critical capability gaps.

The "Nexus" or middle phase will continue to be the resource and allocation phase. Here we focus on verifying the affordability of capabilities defined in our Resource Allocation Plans (RAPs) and ensure that funding requests are consistent with strategy, leadership priorities, and the funding required for major investments. We conclude with the "Program Implementation and Operations" the "back end" phase. This phase focuses on performing oversight and execution of all acquisition investments. We analyze program performance data, and ensure major acquisition program baselines are managed. The purpose is to identify and mitigate program risks and make appropriate program decisions prior to realizing program failures (such as SBInet).

Question 3. Does the Department have the authority it needs to oversee component acquisitions and enforce the policies that have been developed by the Office of Procurement Operations?

Answer. The Department has the necessary authority for policy enforcement and oversight of the Components' major acquisition programs. The policy developed by the Office of the Chief Procurement Officer, Acquisition Program Management Division provides a path of authority for oversight of major programs by the Department at the Management Directorate level. All Component level 1 and 2 acquisition programs are reviewed by the Office of Program Accountability and Risk Management and Acquisition Review Teams that have Department-wide stakeholder representation prior to either the Deputy Secretary or the Under Secretary for Management (USM) approving Acquisition Decision Events. In accordance with the *Management Directive 102-01, Acquisition Management* (AD 102-01) must review and approve critical acquisition life-cycle documents before the programs move forward in the acquisition life-cycle stages. There can be improvement on the policy and the conformance of the component programs in complying with the oversight authority decisions and assigned action items. We are proactively addressing oversight and governance process improvement as outlined in the Department of Homeland Security Program Management and Execution Playbook developed by the USM.

Question 4. Does the Department have a central point of contact to monitor technological acquisitions and ensure that equipment is interoperable across the Department and meets the Department's long-term strategic plan?

Answer. DHS Management Directive 0007.1 requires that the DHS Chief Information Officer (CIO) review and approve any IT acquisition in excess of \$2.5 million. IT Acquisition Reviews (ITARs) ensure alignment with administration and Congressional priorities to effectively manage contracts and procurement risks, as well as with Acquisition Directive 102-01. Each ITAR request goes through the fol-

lowing reviews: Investment, Enterprise Architecture, Information Security, Enterprise Services, Accessibility and Portfolio. Recommendations are provided to the CIO and a determination made for approval, disapproval, or conditional approval.

The DHS Directive AD 102-01 outlines the Department's Acquisition Life Cycle Framework, Acquisition Review Process, and Acquisition Review Board to ensure consistent and efficient acquisition management, support, review, and approval throughout the Department, and links DHS's requirements resources and other processes (e.g. systems engineering, enterprise architecture).

The DHS Systems Engineering Life Cycle Guide (SELC) applies to all DHS IT Systems and projects and establishes a common life cycle frame work used to guide DHS projects, regardless of the acquisition type and size (e.g. capital investment of IT and non-IT, enterprise services, major and non-major).

The CIO is committed to carrying out the DHS mission in an effective and efficient manner. Components are required to annually obtain DHS CIO concurrence with IT infrastructure investments and Operations and Maintenance expenditure plans through a DHS CIO led review of an IT Services Portfolio submission.

Additionally, Office of Management and Budget (OMB) issued a memo on August 8 entitled "Chief Information Officer Authorities" that focuses on, among other items, eliminating duplication and rationalizing agency IT investments to include IT Infrastructure, enterprise IT systems, and business systems. The DHS CIO drives the investment review process for IT investments and has responsibility over the entire IT portfolio. As part of the IT Reform Plan, OMB requires CIOs to ensure that IT portfolio analysis is an integral part of the yearly budget process.

Question 5. What is your view on the Inspector General's recommendation that the Department should revive the Joint Requirements Council and make use of commodity councils in the acquisition process?

Answer. DHS recognizes that the adequacy of requirements definition is essential throughout the acquisition cycle, but most critical during the planning phase. In 2003, DHS established a Joint Requirements Council to serve as a senior requirements review board to identify crosscutting opportunities and common requirements among DHS Components to ensure that the Department uses its resources wisely and in the best interest of the American public. Since this council dissolved, DHS has struggled to ensure Components had clear understanding and guidance on portfolio capabilities and requirements prior to procurement.

In January 2011, DHS identified our objective to re-establish a requirements council to review and validate acquisition program requirements, establish standards, and eliminate unintended redundancies. To that end, we are establishing the Capabilities and Requirements Council (CRC) that will perform "trade-off" decisions, reconcile disagreements across program offices and ensure DHS strategic priorities are met. The CRC will be focused on closing capability gaps based on the DHS' key functional areas (e.g., domain awareness, screening, law enforcement). This will be accomplished by aligning requirements on the basis of broad portfolios, validation of investment strategies, approving analyses of alternatives and Operational Requirement Documents.

This governance model will further enhance the implementation of Management Directive 102-01, *Acquisition Management (MD 102-01)*, which established the overall acquisition lifecycle framework including a pre-planning and planning acquisition process. Required pre-planning documents and activities ensure the Department has a validated need for a capability, understands the requirement, has developed preliminary cost estimates, and has reviewed alternatives before a new acquisition is undertaken. Mission Needs Statements (MNS) are approved by the appropriate Acquisition Decision Authority. Each program is also required to develop and submit for approval three critical planning documents, these are Capability Development Plan (describes what capability would be delivered to DHS, including the need/gap that will be filled by the proposed program), an Operational Requirements Document (ORD), and a Concept of Operations (CONOPs).

To support DHS Component awareness, understanding, and use/adaptation of proven best practices, we plan to establish a Requirements Best Practice Community, which will provide DHS program managers with proven tools, processes, and standards, as well as expert support. This will establish a more defined and repeatable approach to requirement definition to ensure that our process guidance explains the information needed for success and support use of best-in-class requirements management and execution tools and standardize operating models for how to best use the tools. The membership of each Community will include subject matter experts (SMEs) in that discipline from across the Department. While these SMEs will continue to reside and report to their home organizations, they will be available for consultation regarding their expertise in a particular practice which will aid in both mentoring and training throughout DHS.

Question 6. Collectively the private sector has criticized the Department for failing to foster communication and coordination between individual components and with the Department.

How can DHS work to increase information sharing between components and with the Department to prevent these redundancies and overall increase efficiency?

Answer. The Department continues to foster communication and improve coordination among components and between its Components through multiple efforts, including full peering to OneNet; mature Enterprise Architecture with comprehensive segment portfolios; robust enterprise governance with SELC monitoring aligned with key milestones and active guidance by ESCs; private cloud computing aligned with the 25 Point Implementation Plan; secure IT infrastructure that spans Policy Enforcement Points and other Defense-in-Depth controls, as well as the *Federal Information Security Management Act of 2002* mandates; green IT infrastructure through accelerated data center consolidation; and full accessibility aligned with Section 508. These efforts increase information sharing and efficiency by preventing redundancies, minimizing risks, and leveraging the Department's investments.

The Management Directorate and the DHS Private Sector Office (PSO) work with DHS Components to enhance internal and external visibility of existing efforts in order to strengthen Component collaboration on areas that impact the private sector. DHS Headquarters and Operational Components actively engage and coordinate with a wide variety of private sector partners in support of Department-wide initiatives including, but not limited to: Increasing cybersecurity awareness; fostering a National culture of preparedness; maximizing the effectiveness of the National Network of Fusion Centers; and enhancing the security and resilience of the National critical infrastructure.

The PSO leads, and participates in, multiple cross-functional working groups and task forces to develop and implement corrective action plans to more efficiently and effectively engage the private sector. For example, PSO leads the Private Sector Information Sharing Working Group, which meets monthly, to discuss progress on implementing recommendations formed—directly from private sector feedback—to develop more timely and actionable communications with private sector partners. PSO also hosts a monthly call with DHS Component representatives with private sector engagement roles and responsibilities to provide a forum for sharing private sector outreach activities, best practices, and lessons learned and to highlight upcoming activities to improve coordination.

As part of the Department's on-going efforts to improve information sharing, the Office of the Chief Information Officer in the Management Directorate and PSO are working with other Component representatives to develop an intra-DHS Homeland Security Information Network (HSIN) Private Sector Shared Community of Interest to enable increased transparency and synchronization of private sector engagement efforts. PSO is also leading the development of the DHS Private Sector Blueprint that outlines existing DHS private sector engagement to: (i) The identify of any gaps or unnecessary areas of overlap (some overlap/redundancy should and always will exist), (ii) develop strategies to strengthen Component collaboration; and (iii) increase opportunities to leverage existing programs, efforts, and partnerships for the benefit of the whole Department.

The Office of the Chief Procurement Officer's (OCPO) Strategic Sourcing Program also fosters coordination and collaboration among the DHS Components and Headquarters Offices in the identification, planning, and execution of Department-wide procurements. These Department-wide procurements are developed and implemented by a team comprised of representatives from each component to ensure the needs of the entire Department are met, eliminating the need for individual component specific procurements. In addition, the Strategic Sourcing Program Office holds quarterly meetings with component representatives, which are designed to increase the communication and awareness of requirements and potential strategic sourcing initiatives both within the components and Department-wide. The activities of the Strategic Sourcing Program Office increase efficiency, reduce redundancy, and leverage the DHS buying power for commodities and services across the Department.

In addition, DHS is engaging with its private sector partners through periodic meetings with the National Infrastructure Advisory Council (NIAC), a group comprised of private sector stakeholders which advises the President on the security of critical infrastructures which include banking and finance, transportation, energy, manufacturing, and emergency Government services, on discovering new methods to enhance information sharing.

Question 7. How has the Acquisition Review Board improved the management and oversight of acquisitions at DHS? How have you increased oversight of identified high-risk acquisitions?

Answer. To improve acquisition management, DHS developed and implemented a comprehensive approach establishing acquisition management standards and oversight. Directive 102-01, *Acquisition Management* (issued as interim in November 2008 and final in January 2010) established the overall acquisition management framework for all major acquisition programs and formalized Acquisition Review Boards (ARBs) for oversight and governance. As the senior management cross-component board within the Department, the ARB determines whether a proposed acquisition has: (1) Met the requirements of key phases in the acquisition life cycle framework and (2) is thus able to proceed to the next acquisition phase and eventual full production and deployment. The ARB reviews the program's status, progress against the current program plan, and current risks and other program issues. The ARB assesses the program's progress and establishes criteria for further execution. The ARB's findings, decisions, and actions are documented in an Acquisition Decision Memorandum (ADM).

To enhance oversight between Acquisition Review Boards, Component Portfolio Reviews were implemented in 2009 as a means for the Department to review and collaborate with each major program on an annual basis as well as gaining insight on the Components' acquisition oversight processes and staff. This process, jointly executed by the Component and the Department, supports management of the Component's acquisition portfolio and strengthens Departmental governance and oversight. The final report of the review is signed by the CAE and the Executive Director, Office of Program Accountability and Risk Management. These reviews provide insight to systemic acquisition risks across the Department. By the end of fiscal year 2010, nine Component portfolio reviews were held. During these reviews, 61 major programs were examined (over 90 percent of the major program portfolio).

The implementation of Directive 102-01, *Acquisition Management* has improved program oversight over the last 3 years. The ARB reviews the program's status, progress against the current program plan, current risks, and other program issues. The policy has resulted in DHS program having numerous interactions with many of DHS' major programs, and has allowed us to mitigate or avoid cost, schedule, and performance risks. Since early 2008, there have been more than 50 ARBs conducted. We submit a quarterly DHS Major Acquisition Status Report which serves to summarize the current health and highlight our enhanced oversight of these programs.

Question 8. What policies or procedures are in place to improve collaboration, coordination, and awareness of technologies and capabilities across components of the Department, the Federal Government, universities, and the private sector when developing program requirements for acquisitions?

Answer. The Science and Technology Directorate (S&T) has fostered a number of programs and engagements with Components, other Federal agencies, universities, and the private sector to improve collaboration, coordination, and awareness of technologies. The Under Secretary for Management (USM) organizations have been collaborating with S&T on a number of these initiatives. One of USM's internal initiatives is to support DHS Component awareness, understanding, and use/adaptation of proven best practices. USM plans to establish a Requirements Best Practice Community and S&T will establish a corresponding Community for Test and Evaluation. These communities provide DHS Components and program managers with proven tools, processes, and standards, as well as expert support. Each community will establish a more defined and repeatable approach to requirement definition to ensure that our process guidance explains the information needed for success. They will support use of best-in-class requirements management and execution tools as well as standardize operating models for how to best use the tools.

To educate stakeholders on the DHS requirements process and how organizations like S&T address the needs of the DHS Operational Components, first responders, and private sector partners through this process, the DHS Private Sector Office and S&T jointly published *Harnessing the Valuable Experience and Resources of the Private Sector for the Public Good: Innovative Public-Private Partnerships*. This book demonstrates how sharing information on detailed operational requirements and conservative estimates of potential available markets can lead to the cooperative development of needed capabilities. It also contains information on S&T's commercialization initiatives that foster mutually beneficial public-private partnerships in order to field products, technologies, and/or services.

Science and Technology has also established twelve Centers of Excellence (COE) at universities to develop new technologies, tools, and advanced methods to support the DHS mission. COE focus areas include transportation security, food protection, natural disasters, maritime, border security, immigration, explosives detection, etc. Research priorities at each COE are carefully defined and vetted with relevant subject matter experts from across DHS and the Federal Government through formal workgroups. Many COE projects are jointly funded by DHS components or other

agencies, further enhancing collaboration and coordination. We are also working together on a number of IT technology pilot projects with the objective to engage industry partners and operational personnel to evaluate systems before establishing acquisition programs. The goal is to ensure future acquisitions provide necessary capabilities and requirements before executing programs and allocating significant funding to these initiatives.

Question 9. The private sector has stated that there are instances where program requirements are modified after an award of a contract. How have these modifications lead to contract cost overruns and time delays?

Answer. Since the circumstances of each program and any related requirements modifications are different, it is not possible to provide a specific answer to this question. To ensure that contract requirements have been adequately identified at the time of award, the FAR requires that acquisition planning begin as soon as the need is identified. As a result, at the time of contract award, the requirements should have been vetted among all interested parties, with close coordination between the requiring activity and the procuring activity.

Even with such planning, requirements modifications will occur due to a variety of circumstances. Some examples of these requirements modifications include but are not limited to: Changes in funding levels, changes in strategy, and development of new technologies. The program manager attempts to mitigate the impact of any such changes; however, depending on the particular circumstances, there will be instances where contractors may be required to revise their estimated cost and may require time to re-direct their efforts. The result can contribute to cost overruns and schedule delays, which is why we are striving to improve the “front end” of the acquisition process.

DHS will improve the investment effectiveness at the “front end” by providing better linkage between requirements development, resource allocation, procurement and program management. We can ensure planning documents and activities have been accomplished to validate capability needs, define business requirements, perform preliminary cost estimates, and perform alternatives analysis before an acquisition is undertaken. With the proper pre-planning work, an appropriate acquisition strategy can be defined. This will allow potential vendors to clearly understand the Government’s requirements during the solicitation phase resulting in contracts with appropriate solutions and scope to be put into place at time of contract award.

Question 10. What policies and/or procedures do you have in place to ensure regular communication with and support from State and local entities and on-the-ground operation personnel utilizing the new technology and capability when developing program requirements and modifying program requirements?

Answer. While Components are responsible for engaging all of their stakeholders to define program requirements, the *Management Directive 102-01, Acquisition Management* will validate this communication has taken place at different points throughout the acquisition life cycle. The initial point where this occurs is with the definition of the Mission Needs Statement, where the Component or program defines what mission gap exists. We ensure Department communication occurs through the validation of the mission need against Department’s strategic direction (Integrated Planning Guidance) and priorities, and the Office of Policy.

The most significant engagement point in the *Management Directive 102-01, Acquisition Management* is through the development of the Analysis of Alternatives. Here we ensure that the Department has a validated need for a capability, understands the requirement, has developed preliminary cost estimates and has reviewed alternatives before a new acquisition is undertaken. The Component Acquisition Executive is responsible for reviewing and approving the Analysis of Alternatives.

Finally, the Component or Program develops an Operational Requirements Documents (ORD) that defines the business level requirements to fulfill a mission need. We validate that the proper interaction has been completed across the stakeholder community to define these requirements as key performance parameters and ensure the need is not being filled by an existing system or another planned program. The purpose is to identify synergies as well as efficiencies necessary for the Department to meet requirements and achieve DHS enterprise architecture, as applicable.

All acquisition program artifacts are reviewed by the Office of Program Accountability and Risk Management (PARM) prior to a request for a decision on an Acquisition Decision Events (in accordance with the MD 102-01) by the Deputy Secretary or the Under Secretary for Management (USM) who must review and approve these critical planning documents before the program moves forward with the acquisition planning stage.

Question 11. How does the turnover rate of program managers and contracting officers impact program requirement modifications, cost overruns, and time delays?

Answer. Turnover of program managers and contracting officers is an inevitable occurrence, since no individual will stay in a particular job for perpetuity. The impact of such changes is twofold: (a) Filling the position with a capable replacement, and (b) the time required by the replacement to become familiar with the program so that he/she can manage it in an efficient and effective manner. In regards to capable replacements, DHS has implemented a strong certification program for program managers and contracting officers, which has resulted in a cadre of certified individuals that can fill gaps when turnover occurs. In addition, DHS is currently implementing an IT certification program to further fill potential gaps that may result from employee turnover. However, even when the vacancies are filled with qualified individuals, there will almost always be some time delays involved in a transition, as the program manager becomes familiar with the program strategy, funding, and other key elements, and the new contracting officer becomes familiar with the contracting strategy. In addition, as is the case with any other transition activity, the new program manager and/or contracting officer may decide to take the program or contract strategy in a different direction, based on their judgment of the cost/benefits involved in re-directing the strategy. This re-direction could then result in a modification to the program or contract requirements. As noted in our response to the prior question, this requirements modification may in turn result in a revised estimated cost and additional time for the contractor to re-direct their efforts.

Question 12. Does the Department have a strategic plan for the acquisition workforce? What is the Department's plan to recruit, train, and retain acquisition professionals?

Answer. Integrating the Department's people, structures, and processes to achieve the Department's mission goals is one of my top management priorities. The biggest challenge is to institute meaningful change without disrupting mission-critical, day-to-day operations. The "Integrated Strategy for High Risk Management" plan, submitted to GAO in January 2011, detailed our Integrated Investment Life Cycle which I consider to be a holistic process to manage our investments.

DHS recognizes that the adequacy of major Program Management Offices (PMOs) and Acquisition Oversight Staffs varies widely throughout the Department. The Department has issued a performance goal to improve acquisition execution across the Acquisition Portfolio by ensuring key acquisition expertise resides in major program offices and Acquisition Oversight Staffs. In support of this goal, the Under Secretary for Management (USM) directed a program office staffing assessment in fiscal year 2010. This assessment reviewed the staffing of Component major program offices and Acquisition Oversight staffs with a focus on determining the adequacy of key disciplines of Government personnel.

Key findings of the assessment found:

- there is a lack of engineering and logistics expertise across the Department;
- there is an absence of Cost Analysts/Cost Estimators across the Department;
- interpretation of Component Acquisition Executive (CAE) core staff requirements vary by Component;
- certification programs are in place for Program Manager and Contracting Officer's Technical Representative (COTR); and
- certification programs for Logistics, Financial Manager, and Cost Analysts/Estimators are newly established, and System Engineering certification program is in development.

Planned initiatives to address this staff deficiency include expanding the Acquisition Corps, especially in the program management (PM) area; and improving the quality of PM training. The purpose of the Acquisition Corps is to raise the standards of professionalism and performance within the PM discipline, especially in the requirements development and cost estimating phases. A fully-deployed Acquisition Corps will improve efficiency by leveraging resources based on a mission need, as opposed to hiring new employees. Furthermore, because Corps members will complete competency-based training to maintain their Corps status, the effectiveness of critical programs should improve. Like many Federal agencies, DHS does not have sufficient numbers of qualified and trained program managers. Under the direction of the Office of Chief Procurement Officer (CPO), the Department has established several DHS-specific curricula and certifications. During fiscal year 2011 and into fiscal year 2012, the OCPO is working with the OCIO to develop a certification curriculum for program managers in the information technology area. Training effectiveness will be measured and courses provided Nationally. Other agencies have participated in DHS courses and the feedback provided is positive. The enhanced training, along with the expansion of the Acquisition Corps, will significantly increase the acumen among program managers within DHS. It will also provide the flexibility to allocate resources, where needed, and create bench strength within the acquisition workforce to manage resource-challenged programs.

The Department has already established seven acquisition certification programs. Each of the seven identifies the education, training, and experience necessary to effectively execute the responsibilities of that career field. Certification programs have been established for the following career fields: Contracting, program management, test and evaluation, business cost estimating, acquisition financial management, and logistics; DHS has also established a certification program in the Contracting Officer's Technical Representative specialty. Under development is the certification program for systems engineering and we plan to develop a certification program for IT program managers. Supplementing our certification program is our centralized acquisition training program. Our training program includes certification training as well as continuous learning classes in acquisition related topics. When appropriate, DHS customizes its acquisition training program to address applicable DHS policies and procedures. For example, in fiscal year 2010, DHS completed the development of its Program Management curriculum. The tailoring of classes enables DHS to educate its workforce on DHS acquisition policies and on best practices in program management thus fostering a culture of "One DHS." In fiscal year 2011, DHS continues to develop course work specifically tailored to DHS policy and processes. For example, DHS is developing a fundamentals course in test and evaluation, systems engineering, and business cost estimating.

The Acquisition Professional Career Program (APCP) serves as our succession plan for filling future acquisition workforce needs. The APCP is a 3-year development program that recruits high-caliber individuals into the following entry-level acquisition career fields: Contracting, program management, systems engineering, logistics, business, cost estimating, and acquisition information technology. During the program, participants receive acquisition as well as leadership training and obtain certification levels commensurate with their experience. Upon graduation, participants are assigned to component contracting and acquisition program offices as members of the DHS acquisition team. In fiscal year 2011, the Department reaped the benefits of this initiative by graduating 30 contracting specialists. Once fully implemented, the program will deliver 100 trained and certified new acquisition professionals to the DHS acquisition workforce every year to offset losses from retirements and transfers to non-DHS agencies.

Finally, identifying and staffing program offices with the right people with the right skill sets are imperative to strengthening the acquisition management process. In 2010, the Department established a High Priority Performance Goal (HPPG) to ensure that key acquisition expertise resides in our major program and acquisition oversight offices. The Department has met or exceeded all goals related to strengthening the acquisition programs and oversight offices to ensure the Department of Homeland Security (DHS) major acquisitions are effectively managed in order to maximize the value of every DHS dollar. At the end of September 30, 2011, 94% of the Program Managers of major acquisition programs are properly certified in accordance with Department policy, exceeding the fiscal year 2011 target goal of 93%. Since the beginning of the fiscal year, we have increased the number of Program Management Offices (PMO) reporting that they have all five of their respective core positions filled or matrixed from 20 at the end of fiscal year 2010 to 34 and have increased the number of approved Acquisition Program Baselines (APBs) from 17 to 28 at the end of the fourth quarter fiscal year 2011. The current percent of major acquisition programs with a core team; signed APB; and meeting cost/schedule/performance is 89%, exceeding the fiscal year 2011 goal of 70%. All seven major operational Components have a Component Acquisition Executive (CAE) in place (100%). The total number of CAE staff positions filled has also increased from 25 to 42. The current percent of Component acquisition oversight organizations with core team positions filled or matrixed is 75%, meeting the fiscal year 2011 goal of 70%. The percent of PMOs with major acquisition program core team positions filled is roughly 70%, which minimally achieves the Department's goal. Additionally, this year, the Under Secretary for Management has implemented major initiatives to include building the Department's Program Management Corps by strengthening training and certification and expanding the current acquisition mentoring program.

The *DHS Appropriations Act of 2012* provided a total of \$78,000,000 to OCPO, including an increase of \$3,403,000 to enhance DHS acquisition capabilities.

Question 13. The private sector believes that the DHS procurement process could be improved by increased communication and by bringing to the table early in the procurement process end-users, industry, program managers, and contracting officers.

What measures have DHS taken to address this concern?

How does DHS share with industry its mission needs and what measures are you putting in place to improve that dialog?

Answer. The Department of Homeland Security (DHS) recognizes that effective vendor engagement in the acquisition process is critical to competition, the identification of commercial item solutions, and the realization of savings. Following is a series of functions, procedures, and policies that the Department has in place to inform and promote vendor engagement, enhance competition and transparency.

- The DHS Office of the Chief Procurement Officer (OCPO), in conjunction with the Office of General Counsel and its Ethics Office provide on-going guidance to the DHS acquisition community regarding responsible and constructive exchanges with industry.
- DHS's Office of Small and Disadvantaged Business Utilization (OSDBU) and Component Small Business Specialists provide active small business support through:
 - Outreach—participation in over 100 functions per year, and on-going dialogue with small businesses;
 - Preparation and Dissemination of the DHS Acquisition Forecast—generally issued twice a year and updated on an on-going basis.
- OSDBU, with Component support, sponsors popular monthly *Vendor Outreach Sessions*, comprised of a series of pre-arranged 15-minute appointments between DHS Small Business Specialists and representatives from small business communities. These sessions provide the small business community with an opportunity to discuss their capabilities and learn of potential procurement opportunities. Until recently, when the Small Business Central Event Listing was launched on *FedBizopps.gov*, session and registration information was posted by OSDBU on *www.dhs.gov*.
- DHS has an active full-time Ombudsman and Industry Liaison who provides on-going information and advice to industry and Components alike.
- For a number of years, DHS has hosted an annual DHS Industry Day. Industry Day activities include panel discussions from each Component moderated by the respective DHS Head of Contracting Activity (HCA). The panels provide acquisition planning information for the specific Component/Contracting Activity. This 1-day event provides a forum by which the Department can communicate its requirements and increase competition by sharing useful information. Industry Day is open to representatives of both small and large businesses.
- Various DHS Components plan and host Industry Days, issue draft requests for proposals, requests for information (RFI), and hold pre-solicitation conferences and de-briefings on an ad hoc basis.
- The DHS acquisition training, regulations, and policy supplement Federal Acquisition Regulation guidance related to communication with vendors, and establish frameworks that promote responsible and constructive exchanges with industry, e.g., the DHS Market Research Guide's *Rules for Meeting with Industry Representatives* and *Guidelines for One-on-One Discussions*; DHS Procurement Ethics Training contains specific guidance regarding pre-award exchanges with vendors, methods for communicating with vendors, the proper handling of source selection, contractor bid, and proposal information.

To demonstrate DHS's commitment to effective communication with industry, Dr. Nick Nayak, DHS Chief Procurement Officer, has added Quality Industry/Government Communication as one of the OCPO strategic plan's four major priorities. This priority incorporates the DHS plan for improving communication with industry during the acquisition process developed in response to the Office of Federal Procurement Policy's February 2, 2011, memorandum entitled "Myth-Busting: Addressing Misconceptions to Improve Communication with Industry during the Acquisition Process."

On May 4, 2011, the OCPO issued Acquisition Alert 11-18, "Department-wide Plan for Improving Communication with Industry During the Acquisition Process." The Acquisition Alert, issued to DHS Heads of the Contracting Activity (HCAs), and disseminated to the DHS acquisition workforce, included a copy of the "Myth-Busting" memorandum; identified existing DHS functions, procedures, and policies to inform and promote vendor engagement; and established a Department-wide plan of action to be executed over the next year to enhance vendor engagement policies and practices.

Acquisition Alert 11-18 called for the receipt of pledges from HCAs to the Chief Procurement Officer to enhance Component engagement with industry by:

- Designating an appropriately placed Component official to serve as the Component Industry Communication Liaison with responsibility for promoting vendor engagement by the Component, and ensuring that Component contracting personnel are aware of, and implement the DHS Market Research Guide's *Rules for Meeting with Industry Representatives* and *Guidelines for One-on-One Discussions*;

- Communicating early, frequently, and constructively with industry in accordance with the Federal Acquisition Regulation, Homeland Security Acquisition Regulation, Homeland Security Acquisition Manual including the DHS Market Research Guide's *Rules for Meeting with Industry Representatives* and *Guidelines for One-on-One Discussions*, and Component supplements thereto;
- Striving to be more inclusive by including small businesses, subgroups of small businesses, and vendors that the Component has not worked with in the past in their communications with industry;
- Annotating DHS's published procurement forecast to identify procurements that are likely to involve opportunity for additional communication with industry, e.g., pre-solicitation conferences, draft requests for proposals, RFIs, Industry Days;
- Protecting non-public information including vendors' confidential information and the Components' source selection information;
- Promoting Component participation in Department and Government-wide awareness campaigns to eliminate unnecessary barriers to vendor engagement; and,
- Posting and routinely updating engagement events to include industry days, small business outreach sessions, pre-solicitation conferences, RFP question-and-answer sessions, using the existing "special notices" function and the new Small Business Central Event Listing on Government-wide systems such as *FedBizOpps* (www.fbo.gov) in accordance with Acquisition Alert 11-14 which provides detailed information on the Small Business Central Event Listing on *FedBizOpps*).

Every DHS HCA signed and submitted a Vendor Engagement Pledge to the OCPO by June 6, 2011.

HCA Vendor Engagement Pledges were accompanied by Component Industry Communication Liaison designations. As indicated in the pledges, Component Industry Communication Liaisons are responsible for promoting vendor engagement by the Component, and for ensuring that Component contracting personnel are aware of, and implement DHS policies and procedures related to vendor engagement, e.g., the DHS Market Research Guide's *Rules for Meeting with Industry Representatives* and *Guidelines for One-on-One Discussions*. Component Industry Communication Liaisons will also be notified of, and responsible for, promoting Component participation in Department and Government-wide training opportunities and awareness campaigns to eliminate unnecessary barriers to vendor engagement. The DHS and Component Industry Liaison listing has been posted to the following DHS Internet site: <http://www.dhs.gov/xopnbiz/opportunities/industry-communication-liaisons.shtm>.

On August 16, 2011, Component Industry Communication Liaisons will meet with representatives from the OCPO, including the Chief Procurement Officer and DHS Ombudsman, who will establish expectations regarding the Industry Communication Liaisons' roles and advise them of Industry/Government communication enhancement interests and needs, DHS policies and procedures related to vendor engagement, and the various emerging and available tools for enhancing communication with industry. Component Industry Communication Liaisons will be tasked to work with their respective HCAs to develop Component fiscal year 2012 action plans to promote enhanced vendor communication.

Additional actions planned or taken to enhance communication with industry include:

- The DHS Acquisition Planning Guide (Appendix H to Homeland Security Acquisition Manual (HSAM) Chapter 3007) has been amended to require that acquisition plans for major system acquisitions as defined in DHS Directive 102-01 (\$100 million in annual expenditures (for services) and \$300 million (for supplies)), which implements FAR Part 34, include a vendor engagement strategy (as identified in the "Myth-Busting" memorandum) or justify why those steps are unnecessary. DHS policy will also be amended to encourage that acquisition plans for non-major system acquisitions greater than \$10 million include a vendor engagement strategy. Written justifications for not including a vendor engagement strategy will not apply to non-major system acquisition plans.
- Through Acquisition Alert 11-14, "The Small Business Central Event Listing," issued on March 18, 2011, the DHS contracting community was notified of the availability of the new Small Business Central Event Listing, an automated search tool on *FedBizOpps* (www.fbo.gov), designed to highlight small business outreach and training opportunities. The Alert required the DHS Office of Small and Disadvantaged Business Utilization (OSDBU) and each Component to take immediate steps to use the Small Business Central Event Listing feature on *FedBizOpps* (www.fbo.gov) as a means of sharing new information on small

business outreach and training opportunities. Although they are not required to use the FBO Small Business Central Event Listing as their only source for posting small business events information, OSDBU and DHS Component Small Business Specialists were reminded to ensure that any event information posted by them on DHS internet sites is consistent with the information that they post to the FBO Small Business Central Event Listing, and that all information posted is current, complete, and accurate. The DHS OSDBU posts information to FBO on small business events that are attended by all or the majority of DHS Components.

In addition, through their executed Vendor Engagement Pledges, DHS HCAs also pledged to post and routinely update engagement events to include industry days, small business outreach sessions, pre-solicitation conferences, RFP question-and-answer sessions, using the existing “special notices” function and the Small Business Central Event Listing on Government-wide systems such as *FedBizOpps* (www.fbo.gov).

- The DHS Competition and Acquisition Excellence Awards for Promoting and Achieving Competition established in 2007, recognizes outstanding initiatives and accomplishments that contribute to the efficiency, economy, and improvement of procurement operations and agency mission support through the promotion of full and open competition and transparency; the acquisition of commercial items; and challenging barriers to competition. The Department considers the absence of effective Government/Industry communication to be a major barrier to transparency, competition, and the identification of commercial item sources. Therefore, as part of its plan for improving communication with vendors during the acquisition process, DHS will incentivize responsible and constructive exchanges with vendors by including the demonstrated implementation of an effective vendor engagement strategy, e.g., hosting Industry Days, issuance of draft RFPs, pre-solicitation conferences, use of wikis to solicit comments, as a formal evaluation criterion in the evaluation of Component team and individual nominations for the DHS Competition and Acquisition Excellence Awards Program.
- It is important to communicate appropriate information at all stages in the acquisition process and especially valuable to communicate with unsuccessful offerors at the end of the award process. In April 2011, as part of the DHS Communications Plan, OCPO amended the Homeland Security Acquisition Manual (HSAM) to incorporate a new DHS Debriefing Guide (Appendix AA to HSAM Chapter 3015). The Debriefing Guide summarizes regulations and DHS policy regarding debriefings and explanations of the basis for award to encourage communication with unsuccessful offerors as a means of reducing misunderstandings and protests; improving future proposals; and obtaining information that improves DHS’s acquisition process. Beginning in May 2011, OCPO launched related debriefing training for the DHS contracting community.
- On July 6, 2011, DHS announced in *FedBizOpps.gov* the July 11, 2011 release of its Acquisition Planning Forecast System (APFS). The APFS is the Department’s updated acquisition planning and forecasting system which provides real-time access to the DHS Forecast of Contract Opportunities. The user-friendly interface to APFS will allow businesses to use a number of search criteria to narrow their search for business opportunities information and download forecast entries of interest into Excel for further analysis. The APFS is accessible at: www.dhs.gov/xopnbiz.
- Through the Department’s Ombudsman, OSDBU, Component Industry Liaisons and HCAs, DHS plans to follow-up with employees and industry representatives within 6 months of posting the DHS Vendor Engagement Plan (in accordance with the Office of Federal Procurement Policy’s February 2, 2011, “Myth-Busting” memorandum, agency Vendor Engagement Plans must be publically posted following Office of Management and Budget review and clearance) and periodically thereafter, to further refine and improve communication. Post-award surveys will solicit comments and suggestions from Contracting Officers, Program Managers, and offerors for large, complex procurements. Feedback will also be sought as a part of debriefings and focus group meetings.

Question 14. Many acquisition programs have failed to provide full cost-benefit analyses in the early stages of the acquisition process. This has put DHS at risk for cost overruns and performance shortfalls.

Why are acquisition programs being approved without these important documents?

Answer. In November 2008, DHS implemented a comprehensive approach establishing acquisition management standards and oversight through the issuance of Directive 102–01, *Acquisition Management* (final in January 2010). This acquisition

management framework formalized Acquisition oversight and governance for all programs. Oversight of Level 1 and 2 is performed by DHS Under Secretary of Management, while level 3 programs are handled by the Component Acquisition Executives (CAE). This tiered oversight model established a standard process for acquisition and program management oversight, policy, and guidance to ensure statutory, regulatory, and higher-level policy requirements are fulfilled.

The implementation of this directive improved the pre-planning acquisition process. Pre-planning documents, including Analysis of Alternatives (which includes a Cost Benefit Analysis) ensures that the Department has a validated need for a capability, understands the requirement, has developed preliminary cost estimates and has reviewed alternatives before a new acquisition is undertaken. The Component Acquisition Executive is responsible for reviewing and approving the Analysis of Alternatives. All acquisition program artifacts are reviewed by the Acquisition Program Management Division (APMD) before coming forward for Acquisition Decision Events (in accordance with the D 102-01) and approved by either the Deputy Secretary or Under Secretary for Management (USM) who must review and approve these critical planning documents before the program moves forward with the acquisition planning stage.

In rare cases when a program is authorized to proceed without formal document approval, an Acquisition Decision Memorandum is prepared identifying the corrective actions and time frame a program must resolve them. Programs do not proceed through the acquisition life cycle until this occurs. To further improve this, we are developing a risk management element within our decision support tool as well as a standard criterion to evaluate program risks. This module will provide for a centralized means to track risks both at the Department and Component level. The variety of venues the Department uses to review programs strengthens risk management. ARBs, portfolio reviews, and day-to-day contact all aid in identifying risks faced by programs.

Question 15. In your testimony you lay out a plan to improve the acquisition process at DHS to ensure that all acquisition programs have solid and well-defined program requirements.

How will all these new councils and boards ensure that the acquisition process runs smoothly?

How long will it take before we will start seeing improvements in the acquisition process?

Answer. Soon after my arrival at the Department, I convened my senior leadership team to re-energize previous efforts to transform DHS, “knitting the Department” together into a more cohesive, well functioning Department. Integrating the Department’s people, structures, and processes to achieve the Department’s mission goals is one of my top management priorities.

In January 2010, the Department issued an initial integration plan, which focused on seven management initiatives. In January 2011, the Department issued an enhanced plan, “Integrated Strategy for High Risk Management.” The enhanced strategy was developed in collaboration with Headquarters and Component leadership and addressed many of the GAO’s recommendations that have been unresolved since 2003. While there continued to be fundamental challenges across our management functions, I am pleased that GAO has recognized the Department’s progress. In a transformed state, our mission goals will drive strategies and the effectiveness of those strategies will be measured by key performance indicators or outcomes. I am striving to change the old paradigm where budget submissions arbitrarily drove strategy. In the new model, my strategic priorities, currently defined in the Quadrennial Homeland Security Review (QHRSR) will drive operating budgets.

DHS will improve the investment effectiveness at the “front end” by providing better linkage between requirements development, resource allocation, procurement and program management. The model strengthens the “front end” through strategic phasing performed by the Department Strategy Council (DSC) and the Capabilities and Requirements Council (CRC). The CRC will perform “trade-off” decisions, reconcile disagreements across program offices and ensure DHS strategic priorities are met. It will focus on closing capability gaps based on the DHS’ key functional areas (e.g., domain awareness, screening, law enforcement). This will be accomplished by aligning requirements on the basis of broad portfolios, validation of investment strategies, approving analyses of alternatives and Operational Requirement Documents.

QUESTIONS FROM CHAIRMAN MICHAEL T. MCCAUL FOR TARA O'TOOLE

Question 1. The Government Accountability Office just released a report describing the Transportation Security Administration’s (TSA) failure thus far to imple-

ment its 2010 requirements for explosives detection systems. One of the reasons GAO cited for this lapse is that TSA and S&T have experienced challenges in collecting explosives data needed to procure and deploy systems that meet those requirements.

While it is understandable that scientific endeavors like this can be unpredictable, on the other hand, does the process somehow need to be revised so that industry is not gearing up to meet requirements for an acquisition that realistically, simply may not happen due to scientific challenges?

What can we learn from this experience so that we do not find ourselves in a similar position in the future?

Answer. S&T concurs with GAO's recommendation that changes need to be made to the development and acquisition processes. To ensure that TSA has the information it needs to effectively set requirements for future detection systems, S&T is working closely with TSA at all levels to better align S&T research and development programs with TSA's priorities and acquisition schedules. This allows S&T program managers, who are overseeing system development and testing and evaluation, as well as conducting research and gathering data, to establish realistic expectations of the scientific challenges and likely research time frames.

The time required for research and discovery is, of course, inherently difficult to predict. In this case, delays in collecting research data that support TSA acquisition were caused by unexpected technical and safety issues not previously encountered in explosives characterization and detection programs. TSA must establish aggressive acquisition schedules to ensure the rapid deployment of new technology; enhance security capabilities to meet emerging threats; and satisfy budget deadlines established by the use of ARRA funds. S&T and TSA are collaborating on the development of more effective program management practices to address these issues.

One outcome from this experience was the development and commitment to a joint TSA/S&T research and development strategy (documented in Aviation Security Technology Research and Development Strategy—attached) that provides a cohesive vision for technology development and will facilitate the successful transfer of technologies.

In addition to working with TSA, S&T is striving to collaborate closely with industry during the research and development process. By engaging industry as programs are being defined, S&T will be better positioned to anticipate industry's production capabilities to meet potential TSA requirements. Industry will also be brought into the program development cycle earlier so that they have a more accurate understanding of the Department of Homeland Security's needs.

Question 2. Please describe the process by which the components engage you when they plan to acquire technology—that is, do they come to you for assistance when their acquisitions hit a certain cost threshold? If they don't come to you, is anyone assessing whether the technology is sufficiently mature for acquisition or whether it needs more R&D? Have there been any acquisitions that you know of in which you were not involved, but should have been?

Answer. The components are not required to consult S&T when planning to acquire technology, and in the past have not generally done so. Between 2007 and 2010, components sought S&T assistance through the Capstone Integrated Project Team (IPT) process, a practice which allowed the components to prioritize desired technological solutions to operational problems that required research and development investments. S&T then designed and pursued research and development efforts according to budget limitations and technological feasibility. Some of these efforts led to product acquisition, but historically S&T has not played a significant role in DHS acquisitions—except to execute its mandated responsibilities in operational testing and evaluation at the “back end” of the acquisition cycle, typically just before a procurement decision is made. It is important to understand that operational tests assess compliance with the operational requirements established by the component. Creating such requirements is not easy (it has been referred to as a “black art”) and necessitates a deep understanding of the technology being considered; operational needs and constraints; and life cycle cost factors. The evolution of the DHS Acquisition process now underway is intended to elicit and ensure that all acquisitions are governed by robust requirements.

In November 2010, part of S&T's realignment was the establishment of the Acquisition Support and Operations Analysis (ASOA) group, which is intended to serve components' technical acquisition needs upon request. In past months, ASOA has responded to requests for assistance on several planned projects and on projects already underway. Additionally, S&T and the U.S. Secret Service (USSS) are engaged in an “Apex Project,” which is designing a systems-based approach to technology acquisition for a specific aspect of USSS operations. In addition to delivering a systems analysis of potential technologies and their respective “trade space” (i.e., bene-

fits, life-cycle costs, etc.) the project will pilot several possible technology options for consideration. We are also altering our research and development project management process to ensure that successful research can more easily transition into acquisition.

The new S&T/Component Technology Investment Councils (STIC), which are now being established, will build on and strengthen the former Capstone IPTs. The STIC process will include engagement of component leadership and will enable components to request S&T technical and acquisition assistance, as well as request technological solutions.

The Under Secretaries of S&T and DHS Management are both committed to making significant improvement in the DHS acquisition process and are devoting resources to this end. S&T routinely will be engaged in the “front end” of the acquisition cycle, beginning with reviewing the adequacy of technology requirements. In some cases, S&T may assist components in activities that precede the formal “acquisition” process—for example, in analyzing the operational problem or helping to conduct technology analysis of alternatives. S&T also participates in the DHS Acquisition Review Boards (ARBs), which are the highest DHS acquisition decision-making forums for acquisition programs. S&T’s two members of the ARB are our Component Acquisition Executive and the Director of Operational Test & Evaluation. Through these representatives, S&T is able to provide input into the acquisition decision-making body regarding the technological and testing readiness of component acquisition programs before they advance to the next phase of the acquisition process.

Question 3. One of your responsibilities in providing acquisitions support is assessing the technical risks of technologies under consideration for procurement. That is to say, your subject matter experts make assessments as to the maturity and suitability of technologies for their intended purpose, thereby avoiding major acquisitions mistakes and financial waste.

Can you please tell the committee whether or not you have a formal, metrics-based process in place to comprehensively assess such technical risks? If not, when do you plan to implement such a system to ensure consistency and rigor across the Department’s procurements?

Answer. S&T uses a standard Technology Readiness Level process to assess the technological maturity of projects and programs within a research and development context. This metric-oriented process includes standard definitions for nine readiness levels in research and development. TRLs do not, however, assess the suitability of a technology for certain applications or allow reliable comparisons of different technologies. S&T’s portfolio review process, to which all S&T research and development projects are subject on an on-going basis, includes several metrics for assessing “technical risk.” Within the context of an on-going acquisition, iterative developmental testing against established requirements is essential to mitigate technical risk. Developmental testing is the responsibility of the component. S&T, as the designated operational test authority for DHS, oversees operational testing prior to making procurement decisions.

S&T is the co-chair of a new Technology, Science & Acquisition Risk Working Group, which is part of the Department’s Risk Steering Committee. This working group will continue to standardize the Department’s approach to measuring technological risk across its investments.

Question 4. How do you prioritize your research efforts—are the customers involved? Is this process agile so that it can be responsive to unanticipated and emerging threats?

Answer. At the strategic level, the directorate’s priorities for areas of research, development, and analysis are derived from an understanding of near- and long-term threats, National needs, and DHS mission needs and operational vulnerabilities, as articulated in the administration’s National Security Strategy, the Quadrennial Homeland Security Review (QHSR), and the capability gaps and operational requirements of DHS components and first responder communities as established through the STIC process. Each proposed “new start,” as well as each on-going project in our research and development portfolio, undergoes an on-going review to ensure that it remains relevant, feasible, and effective.

In reviewing the portfolio, we study written materials, listen to the project manager’s oral presentation, and carefully analyze the project’s likely impact and feasibility (or “riskiness”), measuring these attributes against specific metrics determined by S&T with input from the operating components. These metrics establish a framework to address elements essential to ensuring that the program will help DHS meet one or more of its missions, as defined in the QHSR. These elements include:

- *Relevance.*—To what extent are the project’s product(s) aligned with a concept of operations?
- *Clarity of customer need.*—Are the customer’s requirements clear?
- *Nature of customer involvement.*—Is the team closely collaborating with the customer to understand, define, and agree upon project details?
- *Impact potential.*—Do the project’s product(s) provide advantages (such as speed, quality, affordability, superior concept of operation or breadth of deployment) over the customer’s current approach to dealing with the problem?
- *Research leadership.*—Has this project resulted in accomplishments (publications, patents, awards, impact on high-visibility programs or personnel development) that will position the directorate as a research leader?
- *Innovation.*—Does the project try to realize its objectives in a way that others have not previously considered or exploited?
- *Technical/research feasibility.*—How difficult are the technical or research challenges facing this project?
- *Project clarity.*—How well is the project described or laid-out? Is it clear what the team will do? Is the problem well-defined? Is the approach clear?
- *Transition likelihood.*—Is there a clear path to transition? To customer readiness? Are there any secondary issues related to the concept of operation; proponenty; budgeting, regulatory or statutory realities; and business value?
- *Technical maturity.*—What is the life-cycle stage of the core technology that enables this effort?
- *Time-to-first-use.*—When will the results of this research be usable by a user in the field?

Each project is evaluated and rated by a review panel composed of S&T leaders, DHS component representatives and independent technical experts. By measuring all of S&T projects against the framework, we establish a shareable view of all research and development within S&T. In so doing, we enable more strategic, longer-term budget decisions; ensure efficient delivery to the component or individual user; and cultivate effective communication throughout the process. We also continue to partner with DHS components through the S&T/Component Technology Investment Council (successor to the Integrated Product Team, or IPT) process to help its members develop and prioritize requirements that improve components’ mission performance.

Question 5. How does S&T provide for customer feedback throughout the development of a technology to ensure the technology will be useful and fit within any operational constraints?

Answer. Component “customer” feedback has historically been provided to S&T via the Capstone IPT process and will be strengthened through the STIC process. Feedback has also been provided in working level IPTs between the components and S&T and via internal portfolio and strategy reviews. We have successfully piloted a new “partnership” approach to research and development projects through the APEX projects now underway with USSS and Customs and Border Protection. We intend to emphasize customer engagement as a key variable in future decisions about research and development investments. All STIC requests for S&T to perform research and development will require endorsement by the component head or his designate. Any S&T investments beyond early, exploratory phase research will require the formation of a “partnership” between S&T and the component, with specific individuals, including operators representing the “end users” of the technology. This will help ensure on-going communication and collaboration between S&T and the operating units, as well as a realistic understanding of the pertinent operational constraints. S&T’s research and development projects will also include progressively detailed estimates of needed pilot trials, training, and life cycle costs.

Question 6. Does S&T have any formal annual or periodic review process where you and the divisions engage external experts in assessing research progress against established project milestones?

Answer. We have established a process of on-going reviews of our entire research and development portfolio to ensure that we are: (1) Investing in technologies that will significantly improve DHS’s efforts to help secure the country and (2) meeting the goals established by our partners in the operating components and the broader homeland security enterprise (HSE). We have committed to an annual review of our portfolio of basic and applied research and development and all proposed new projects. During this annual review we study written materials, hear a presentation by the project manager and carefully analyze the project’s likely impact and feasibility (or “riskiness”), judging these attributes against specific metrics determined by S&T with input from the operating components. These metrics establish a framework to address elements essential to programmatic success in the context of the DHS missions spelled out in the Quadrennial Homeland Security Review (QHSR).

The framework assesses the project's overall impact on customer mission; transition of products to the field; investment in technology to position S&T for the future; coordination with customers to align projects with their requirements; and application of an innovative strategy. Each project is evaluated by a review panel composed of S&T leaders, DHS component representatives and independent experts. By measuring all of S&T's projects against the framework, we establish a transparent view of all research and development within S&T to enable more strategic, longer-term budget decisions; ensure efficient delivery to the component or individual user; and cultivate effective communication. These are the same review model and framework used by both Federal and private research and development organizations, including the prize-winning Army Engineer Research and Development Center.

Question 7. What criteria does S&T use to determine whether it will task a Department of Energy (DOE) National Laboratory, other Federally Funded Research and Development Centers (FFRDC), universities, or the private sector with performing R&D to meet identified requirements?

Answer. Selecting a performer to conduct a specific task or research and development project is one of the most important steps in research and development. It requires diligent investigation of potential performers, on-going evaluation and careful professional judgment. S&T has embarked on an effort to establish a disciplined, efficient approach to "technology foraging"—the process of scanning the wide, dynamic horizon of research and development to identify, locate, and evaluate emerging or existing technologies, products, and services, as well as trends in the public and private sectors that could affect the development of current or future homeland security systems and architectures, S&T programs or operational needs.

We are piloting possible approaches to technology foraging which meet S&T's purposes and financial constraints. Foraging services used by private-sector technology companies whose product sectors are specialized costs millions of dollars per year. Foraging across the broad range of technologies used and needed by DHS is extremely challenging.

S&T attempts to select the best performer, basing each selection on the task requirements, but some groups have particular strengths.

S&T relies on DOE laboratories to provide enduring capabilities, such as facilities, infrastructure, management systems, and highly trained personnel, to deliver critical homeland security solutions. For example, these laboratories are among the few facilities capable of testing certain characteristics of homemade explosives. When S&T enlists a DOE laboratory, it is because that laboratory possesses unique capabilities and expertise gained from decades of research and development in its field(s). For example, one laboratory's understanding of certain mathematical models of explosive effects, gained from its nuclear weapons missions, proved invaluable for modeling aspects of aviation security threats. The DOE laboratories also possess unique capabilities in high-speed computing and chip manufacturing, capabilities that are important to certain biodefense activities. Moreover, the DOE facilities invest a portion of their S&T funds toward building capabilities for future homeland security needs. Finally, these laboratories are especially suited to conduct basic research and investigations into complex, enduring, National security problems requiring multidisciplinary expertise.

DHS Federally Funded Research and Development Centers (FFRDC) perform a variety of tasks, including systems engineering; conducting studies and analyses; and operating research laboratories. FFRDCs provide a unique service to the Government, serving as internal consultants. The FFRDC's broad, deep knowledge of DHS; their ability to start work quickly; and their ability to attract and retain high-quality scientific, technical, and analytic expertise makes them ideal for certain tasks and problem sets. For example, the Homeland Security Studies and Analysis Institute (HSSAI) was able to rapidly establish a team and conduct an analysis of alternatives related to the original electronic fence along the Southern border. Some tasks require long-term consultation, which the FFRDC are also suited to provide. Thus, we utilized the Homeland Security Systems Engineering and Development Institute (HS SEDI) to construct a "systems analysis" of aviation checkpoint security, a project that has yielded important insights and which is likely to continue as operations and threats evolve.

Federally Funded Research and Development Centers provide an independent perspective on the critical issues that they address for their sponsor(s) and users. A Federally Funded Research and Development Center has access beyond the level of access common to the normal contractual relationship. It also has access to Government and supplier data (including sensitive and proprietary data) and to Government employees and facilities. A Federally Funded Research and Development Center may not use its privileged information or access to compete with the private sector.

A great deal of innovative technology emerges from the private sector, particularly from small businesses. The directorate has a very active, award-winning Small Business Innovation Research (SBIR) office. Through that office, we are seeking better ways to reach out to companies that do not traditionally do business with the Government; this is the most important reason we are seeking an extension of Other Transaction (OT) authority. We have begun to step up our engagements with the private sector through "industry days," which are intended to signal the Department's technology needs and priorities and to better understand companies' potential offerings.

Traditionally, universities have conducted mostly basic research; however, this tradition is changing. Many of S&T's university Centers of Excellence (COEs) are producing technologies and analytical products of great interest to the Department. The work of these researchers is well-known to S&T. Now, DHS components are also increasingly reaching out directly to the centers. To date, DHS components have signed COE contracts worth approximately \$22 million in research.

The directorate works with the Department's Office of Procurement Operations (OPO) to reach the private sector, universities, and nonprofits. Any of these entities can respond to a number of S&T solicitations, and our Office of University Programs awards contracts to university consortiums to serve as centers of excellence for conducting homeland security research. S&T and OPO established selection criteria that includes past performance, availability of technical personnel, preparedness (for example, how steep will the learning curve be?), subject matter expertise, capabilities, such as facilities, and costs.

Question 8. We realize there are a number of vacancies within S&T and it is not a unique problem you face in attracting technical experts from the private sector to Government service.

In order to meet your goals, including providing Testing and Evaluation (T&E) and acquisition support to the components, do you believe you are adequately staffed or staffed with the appropriate expertise?

Would any special hiring authorities help to attract the right expertise?

Answer. The Testing & Evaluation area is mature and properly staffed. The broader acquisition support area is new to S&T. ASOA's missions and objectives have recently been completed. Currently, staffing needs are being met through the identification of new personnel and new billets and/or through the realignment of existing personnel. In general, attracting scientists and engineers to Government service is difficult, in part because there is still strong demand for these skill sets in the private sector and these professionals do not naturally consider Government as a career option, and also because pay scales are not competitive with the private sector. A big impediment to hiring technical experts is the extremely long time frames (upwards of 6 months) required to complete the Federal hiring and clearance process. S&T has made important use of ST, 1101, IPA positions and other special authorities to attract and rapidly hire technical professionals. While we have made great use of these authorities, they are intended to bring expert level staff into the Government. Additional direct hire authority for entry- and mid-level staff in the difficult-to-attract specialties in the engineering, science, and technology-related job series would help S&T become more competitive in the job market and build a solid stable of scientists and engineers within the Government. Similar authorities exist for other highly skilled professional series, such as legal and medical staff.

Question 9. You mentioned that The Science and Technology Investment Councils (STIC) is currently being developed and that several of the components of it will be in place by the end of the fall.

What is the date of when you are supposed to be completed with developing all of STIC?

Are you currently on track for the development?

When is a estimated date of when these developments will be implemented?

Are you anticipating any problems from changing from the Capstone Integrated Product Teams process to STIC?

Answer. The S&T/Component Technology Investment Council (STIC) plan is complete and is being socialized within the DHS component and headquarters organizations. The STIC process builds upon the Capstone IPT process but raises the focus to a more strategic level with individual components. We do not anticipate problems evolving from IPTs to STICs. Although research and development projects selected through the STIC process will require more ongoing engagement of the components than was usual under the IPT process, the big change will be the significant decrease in the S&T research and development budget and consequently, a far more competitive environment for selecting projects to pursue. The number of research and development projects in the S&T portfolio has decreased by 60 percent since 2010, from 258 projects to 158 as of July 2011.

Three STIC component teams will commence in the 1st quarter of fiscal year 2012 and we anticipate that three additional teams will begin in 2nd quarter fiscal year 2012. The remaining STIC component teams will start in 3rd quarter fiscal year 2012.

Question 10. You have previously testified that work needs to be done “transitioning projects through operational testing and pilots to adoption by the customer” and on-the-ground operations.

How can this transitioning process be accomplished in a more cost-efficient manner?

What obstacles inhibited piloting and testing procedures from being completed thoroughly before implementation in the past?

What can be done to overcome those obstacles? What steps have you taken to increase oversight over review processes to ensure that R&D and project investment are completed on-time and in a thorough way?

Answer. Successfully transitioning new technology from research and development to routine use is a complex process. It is essential that research and development begin with a detailed, accurate understanding of the purpose the technology is intended to serve, and a similar understanding of the user’s operational needs and constraints, including cost factors. All these factors should be repeatedly reaffirmed and elaborated upon throughout the course of development, in consultation with the component leadership and the technology’s intended users. A strong partnership between S&T and component authorities is needed to ensure that the research and development effort remains a priority and that the component is preparing to conduct appropriate operational testing, piloting training, and acquisition if the technology proves successful.

Due to the urgent operational needs and the need to significantly leverage greatly reduced S&T budgets, the directorate is emphasizing the adaptation or adoption of technologies that have reached the late stages of development, or technologies in which others have invested or will invest heavily. We will seek to identify such research and development opportunities through technology foraging, as described in our response to questions 7 and 11.

Question 11a. The contract and acquisition process has become slow and cumbersome and has failed to establish proper communication channels with customers and understanding of operational needs and constraints.

What process do you have in place to identify operational needs that require technology solutions?

Answer. We work with components to define S&T research and development projects. Historically, this partnership has been accomplished through the Capstone IPT process. However, S&T is transitioning to two new forms of partnership: (1) A more strategically focused process called the S&T/Component Technology Investment Council (STIC), and (2) APEX projects. STICs elevate participation to the most senior levels of our directorate and of each component. The goal of these STICs is to engage S&T and the components in a systematic manner to identify critical operational needs within and across components that require technology solutions and development by S&T. In addition, the S&T staff works closely with operators in the field to clearly understand mission needs and operational realities. At the component’s request S&T has also begun to detail technical experts to particular component programs to help with specific operational problems and to acquire a deeper understanding of component needs and operations. An APEX project, meanwhile, must address high-priority problems and be reasonably amenable to the formulation of solutions within 18 to 24 months. Each project’s purpose and approach are codified in a charter signed by the Under Secretary for Science and Technology and the component’s head. APEX projects are carried out by well-resourced, multidisciplinary teams that include both S&T professionals and operators.

Question 11b. If a technology solution is needed, are your divisions directed to see if off-the-shelf technology is available or whether technology can be leveraged from other Government agencies before proceeding with an R&D effort?

Answer. Yes. Such “technology foraging” is a requirement for all research and development projects. We recognize that such foraging can reduce both the cost and the time required for research and development. Accordingly, we actively seek partnerships that would leverage our own investments. Indeed, our 2010 realignment established the Research and Development Partnerships Group. That office provides a portal through which the Department can broadcast its technology needs and interests. The office also allows the directorate to efficiently scan the opportunities within the diverse, dynamic research and development community throughout the world. When assessing technology needs, we consider whether the solutions already exist; whether other parties are addressing these gaps; and whether there is an existing opportunity that DHS can leverage. We seek commercial-off-the-shelf (COTS)

solutions from the commercial sector, other Government agencies, National laboratories, and universities. S&T is a member of IQT (In-Q-Tel), a venture-enabled fund established to link the intelligence community with developments in certain areas of technology development and to leverage Government technology investments with private capital. We have several IQT projects under way.

Question 11c. How have the new Apex projects helped to bridge the customer-developer communication gap and provided oversight?

Answer. S&T develops APEX projects in partnership with the component to instill ownership and commitment by both organizations. Both the S&T Under Secretary and the component head sign a charter outlining the project's objectives, goals, and resources. This partnership allows S&T to fully understand the component's needs and mission. The component is a full partner and weighs in on requirements, planning, technology development, and employment of the final product. All APEX projects are conducted by teams consisting of S&T staff and component staff; all are well-resourced. Lessons learned from the APEX projects are being disseminated throughout other S&T project plans.

Question 11d. How has S&T worked with DHS Component leaders to oversee project goals and continuously assess each project's progress on a case-by-case basis?

Answer. S&T engages component leaders throughout the STIC process and APEX projects. As a result of these partnerships, both S&T and components dedicate staff and resources to the project. Component staff works with S&T to plan, define requirements and provide feedback by participating in working groups, testing and evaluation, program reviews, and other activities. This partnership helps ensure that S&T understands the components' requirements and meets them.

Question 12. How has the Office of Private-Public Partnerships leveraged the innovative ideas and technologies of the private sector to DHS?

What actions can be taken to enhance the level of technology foraging within the private sector?

What acquisition and contracting processes inhibit this process from being completed in a cost-efficient and timely manner?

Answer. DHS S&T's Office of Public-Private Partnerships (PPP), residing in the Research and Development Partnerships Group (RDP), is committed to ensuring that personnel both within S&T and throughout DHS are aware of the myriad of technological advancements underway in the private sector. As such, it has created a robust outreach capability designed to maximize DHS insight into the private sector and enhance the private sector's understanding of DHS requirements. Examples of this outreach include: Publishing "Opportunities for the Private Sector," a guide designed to instruct the private sector on how to effectively work with DHS; publishing "Developing Operational Requirements: A Guide to the Cost-Effective and Efficient Communication of Needs," which was designed to instruct operating components of DHS and other potential end-users of technology, such as first responders, on how to convey their needs to the private sector; and the sending of a Full Response Package to all private sector entities that contact DHS S&T.

The creation of a repository of more than 600 companies and 3,800 self-reported capabilities potentially aligned to DHS needs and requirements has resulted from this outreach. PPP updates and maintains this repository and program managers throughout S&T can access it as part of technology foraging activities to identify potential alternatives throughout the life cycle of a program.

S&T understands that leveraging private sector and other public sector technologies, capabilities, and services can help provide needed high-impact knowledge and products to DHS stakeholders at increased cost savings and speed of execution. Though PPP and its member offices form a strong basis for technology foraging at S&T, we are also looking to work with Federally-funded research and development centers and industry partners to increase our foraging capabilities and to dive deeper into technology markets, on-going research, state-of-the-science, and technology forecasting. Analysts from PPP are working with other organizations that perform technology forecasting to extract lessons learned and best practices and to build partnerships.

S&T already has several acquisition and partnering vehicles in place to work with the private sector and other partners across the homeland security enterprise (HSE). Memorandums of Understanding, Memorandums of Agreement, Cooperative Research & Development Agreements and other non-procurement vehicles allow faster open information and knowledge sharing than the normal acquisition (contracting) methods. These vehicles enable S&T to gain useful and actionable information on products and activities relevant to the HSE needs that may be underway in the private sector, the National laboratories, university communities, and other Federal agencies.

Question 13. A November 2008 GAO Report cited that “many major investments lacked basic acquisition documents necessary to inform the investment review process.”

What measures have you taken to address this?

Is it a matter of simply needing better planning and oversight? Or do you believe that the acquisition process needs changing?

Answer. We do not have detailed insight into why prior acquisition decisions were made. Since 2009, we have been engaged in the operational testing and evaluation aspects of acquisitions of a certain size through our Test & Evaluation and Standards office. In the past 18 months, the directorate has become increasingly engaged in the design and implementation of the Department’s acquisition process. As this process evolves, we will play an on-going role. The Department recognizes the need to improve the acquisition process; accordingly, it is implementing improvements to reduce cost and schedule overruns. DHS recently published an Integrated Strategy for High Risk Management. That report provides a comprehensive vision and strategy to manage all Department-wide investments. We will be a prominent member at the beginning of the acquisition cycle and remain involved throughout the acquisition cycle, working closely with four groups of decision-makers:

- *Department Strategy Council.*—We will inform strategic direction and priorities, using scientific data and methodologies to analyze National threats, vulnerabilities, and consequences.
- *Capabilities and Requirements Council.*—We will reconcile strategic requirements with Department research and development capability, leveraging existing customer-focused, integrated product teams.
- *Program Review Board.*—We will provide input into the prioritization and allocation of research and development funding among projects for the annual budget and 5-year Future Years Homeland Security Program.
- *Investment Review Board.*—We will establish the criteria for testing and evaluation.

To enable improved acquisition decisions, we have established an Acquisition Support and Operations Analysis (ASOA) group, which provides the DHS components with a full range of coordinated operations analysis; systems engineering; test and evaluation; and standards development support. ASOA will leverage the directorate’s critical mass of technical capability within the Department and will work with the Under Secretary for Management to:

- Help the components develop high-fidelity, testable operational requirements for their acquisitions;
- Help execute an analysis of alternatives to ensure that the most appropriate technical approach is taken;
- Partner with the components throughout an acquisition so user needs are translated into real capabilities that can be validated upon delivery and deployed without delay. For example, the ASOA group currently is assisting Customs and Border Protection with the Automated Commercial Environment (ACE), the Mobile Broadband Modernization Program and the Secure Transit Corridors Program.

Question 14. The establishment of the Acquisition Support and Operations Analysis (ASOA) has been designed to leverage S&T’s technical capability within DHS to aid in analyzing alternatives and ensuring that user needs are translated into real capabilities and deployment without delay.

Has ASOA been effective in establishing operational requirements in the front end of the acquisition process?

Answer. The Acquisition Support and Operations Analysis (ASOA) group was established in the 1st quarter fiscal year 2011 and permanent leadership was put in place in April 2011. ASOA has designed the S&T/Component Technology Investment Council (STIC) process to identify prioritized operational requirements and potential technology solutions to more increased effective transitions into acquisition programs. ASOA has also engaged the Under Secretary for Management, Assistant Secretary for Policy and DHS operational components to support the establishment of the DHS front end requirements process. As the STIC process becomes operational, results will be seen in fiscal year 2012 in terms of establishment of operational requirements.

Question 15. What are the benefits of the Other Transaction Authority? What is the extent to which the use of such authority has contributed to developing technology in order to meet the needs of the Department and to promoting the National security of the United States?

Answer. DHS was given Other Transaction (OT) authority so that it could obtain leading-edge research and development and prototypes that address significant National security needs from sources that cannot be accessed through traditional Gov-

ernment procurements. Some companies and other entities are unwilling or unable to meet all of the Government's procurement regulations in the time required to deliver a needed capability or technology.

The authority to enter into OTs for research can be used to help develop support technologies of significant importance to DHS to meet the Department's future mission needs. Often these arrangements are made for programs in which industry and Government share in both the expenses and the benefits. The focus is on programs where both parties see a future benefit in the resulting products, such as dual-use science and technology programs.

The authority to enter into OTs for prototype projects can be used to carry out prototype projects that are directly relevant to systems the Department will develop and deploy. These projects could include prototypes of systems, subsystems or components. Typically they are a limited run of devices, not a replacement for a major acquisition program.

The following are 10 Awards pursuant to Other Transaction Authorities in fiscal year 2010:

Title	Type	Awarding Office	Awardee	Fiscal Year 2010	Obligation
Lightweight Autonomous Chemical Identification System (LACIS). Technical Objective	OT for Prototype	DHS Office of Procurement Operations.	Sensor Research and Development (SRD) Corporation.	\$136,000	
Develop, field-test, and transition to commercial use a next-generation, hand-portable detection system for chemical vapor hazards such as Chemical Warfare Agents (CWAs) and high-priority Toxic Industrial Chemicals (TICs). The detection system will provide responders at an incident scene with an accurate, near real-time analysis of chemical hazards that may be present. The detection system will meet the needs of first responders in determining what level of personal protective equipment would be required at an incident scene.					
Autonomous Rapid Facility Chemical Agent Monitor (ARFCAM). Technical Objective	OT for Prototype	DHS Office of Procurement Operations.	Smiths Detection Watford (SDW).		Both parties mutually agreed that the effort should be de-scoped and the funds de-obligated.
Develop a "detect-to-protect" system that is capable of monitoring facilities for the presence of CWAs and high-priority TICs. The SDW system will have the capability to continuously and autonomously monitor and detect dangerous levels of these chemicals. The system's response time will provide sufficient warning to engage effective response measures that include actively managing air flows, evacuating facilities, and notifying responders.					
Autonomous Rapid Facility Chemical Agent Monitor (ARFCAM). Technical Objective	OT for Prototype	DHS Office of Procurement Operations.	Bruker Daltonics	\$701,325	
Develop a "detect-to-protect" system that is capable of monitoring facilities for the presence of CWAs and high-priority TICs. The Bruker Daltonics system will have the capability to continuously and autonomously monitor and detect dangerous levels of these chemicals. The system's response time will provide sufficient warning to engage effective response measures that include actively managing air flows, evacuating facilities, and notifying responders.					
Autonomous Rapid Facility Chemical Agent Monitor (ARFCAM). Technical Objective	OT for Prototype	DHS Office of Procurement Operations.	Hamilton Standard	\$293,013	
Develop a "detect-to-protect" system that is capable of monitoring facilities for the presence of CWAs and high-priority TICs. The Hamilton Standard system will have the capability to continuously and autonomously monitor and detect dangerous levels of these chemicals. The system's response time will provide sufficient warning to engage effective [sic]					

<p>Lightweight Autonomous Chemical Identification System (LACIS). Technical Objective</p>	<p>OT for Prototype</p>	<p>DHS Office of Procurement Operations.</p>	<p>Smiths Detection—Edgewood Inc.</p>	<p>\$2,554,887</p>
<p>Develop, field-test, and transition to commercial use a next-generation, hand-portable detection system for chemical vapor hazards such as Chemical Warfare Agents (CWAs) and high-priority Toxic Industrial Chemicals (TICs). The detection system will provide responders at an incident scene with an accurate, near real-time analysis of chemical hazards that may be present. The detection system will meet the needs of first responders in determining what level of personal protective equipment would be required at an incident scene.</p>				
<p>Instantaneous Bio-Aerosol Detector System (IBADS). Technical Objective</p>	<p>OT for Prototype</p>	<p>DHS Office of Procurement Operations.</p>	<p>Menon & Associates, Inc.</p>	<p>\$123,854</p>
<p>Will develop biological aerosol detection and sensor systems for monitoring the Nation's critical infrastructure. These "detect-to-protect" systems detect biological agents within minutes to protect critical infrastructure facilities and their occupants.</p>				
<p>Critical Infrastructure Protection (CIP). Technical Objective</p>	<p>OT for Research</p>	<p>DHS Office of Procurement Operations.</p>	<p>National Institute for Hometown Security, Inc (NIHS).</p>	<p>\$9,250,000</p>
<p>Provides program management support in the areas of research, development, and application of community-based critical infrastructure protection technology. Under this effort, the NIHS, a Kentucky non-profit corporation is an enterprise which focuses on research and solutions, research requirements definition, technology transfer, and commercialization and outreach activities.</p>				
<p>Resilient Electric Grid (REG). Technical Objective</p>	<p>OT for Prototype</p>	<p>DHS Office of Procurement Operations.</p>	<p>American Superconductor Corporation (AMSC).</p>	<p>Funds were re-aligned due to changes in project structure.</p>
<p>Under the Homeland Innovative Prototypical Solution (HIPS) Program, the recipient provides REG planning and demonstration support. In conjunction with Consolidated Edison and Southwire Co, AMSC will focus on developing, designing, and deploying the world's first fault current limiting high temperature superconductor electric cable system.</p>				
<p>Operational Testing and Evaluation of Solutions for Cargo Screening Program Initiatives; Vulnerability and Mitigation Assessment for General Aviation Airports; and Checkpoint Security Equipment Data Collection.</p>	<p>OT for Prototype</p>	<p>DHS Office of Procurement Operations.</p>	<p>National Safe Skies Alliance (NSSA).</p>	<p>\$2,075,730</p>

Title	Type	Awarding Office	Awardee	Fiscal Year 2010	Obligation
<p>Technical Objective</p> <p><i>Cargo Screening:</i> The NSSA will be assisting DHS to work through this mitigation risk and danger by assessing and evaluating new security technologies for use in the air cargo industry to further enhance security beyond the baseline standards. <i>Vulnerability and Mitigation Assessment for General Aviation (GA) Airports:</i> Under the GA Assessment, the NSSA is tasked to assist DHS in researching and organizing the scientific, engineering, and technological resources of the United States in order to leverage existing resources and create technological tools to help protect the Homeland. <i>Checkpoint Security Equipment (CPSE) Data Collection:</i> DHS Science and Technology Directorate (S&T) Explosive Division (EXD) develops the technical capabilities to detect, interdict, and lessen the impacts of non-nuclear explosives used in terrorist attacks against mass transit, civil aviation, and critical infrastructure. This includes passenger, baggage, and cargo-screening technologies; blast-resistant aircraft construction; and integrated protective systems for high-value facilities.</p>		Awarding Office			
<p>Multi-Assay Enabled Wide-Area Sampling and Testing (MAEWEST)—Phase II.</p>	<p>OT for Prototype</p>	DHS Office of Procurement Operations.	Red X Defense (RedX)	\$1,621	
<p>Technical Objective</p>	<p>Improves upon RedX's existing optical explosives detection ink into microcapsules applied directly to the sampling substrate, thus eliminating the need for bulky and mechanically complex spray applications and lighting systems. This design simplification and reduction in power requirement shall allow for the manufacture of a low-cost, easy-to-use, rugged pocket-sized device that eliminates the common challenges to widespread deployment of other explosives detectors.</p>				