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TSA REFORM: EXPLORING INNOVATIONS IN TECHNOLOGY PROCUREMENT TO STIMULATE JOB GROWTH

HEARING

BEFORE THE

SUBCOMMITTEE ON TRANSPORTATION SECURITY

OF THE

COMMITTEE ON HOMELAND SECURITY HOUSE OF REPRESENTATIVES

ONE HUNDRED TWELFTH CONGRESS

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TSA REFORM: EXPLORING INNOVATIONS IN TECHNOLOGY PROCUREMENT TO STIMULATE JOB GROWTH

Thursday, September 22, 2011

U.S. HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TRANSPORTATION SECURITY,
COMMITTEE ON HOMELAND SECURITY,
Washington, DC.

The subcommittee met, pursuant to call, at 10:01 a.m., in Room 311, Cannon House Office Building, Hon. Mike Rogers [Chairman of the subcommittee] presiding.

Present: Representatives Rogers, Jackson Lee, Davis, Richmond, and Thompson (ex officio).

Mr. ROGERS. The Committee on Homeland Security Subcommittee on Transportation Security will come to order. The subcommittee is meeting today to examine innovative solutions to technology procurement at TSA that could generate cost savings for the Federal Government and stimulate job growth in the private sector.

I will recognize myself now for an opening statement. I do want to make a point that the Ranking Member, Ms. Jackson Lee, called me a little while ago. She is currently giving a speech downtown and is going to be a few minutes late. So we will get started and she will be here as soon as she can.

I would like to welcome everybody to our hearing today and thank the witnesses for the time they have put into these prepared remarks and making themselves available for this hearing. I look forward to your comments.

As part of our oversight of the Transportation Security Administration, one of the things we are looking to do is to encourage good ideas that will stimulate job growth in the private sector. Given the hundreds of millions of dollars that the agency spends on technology procurement per year, I believe the TSA has ample opportunity to generate any number of private-sector jobs. The House-passed fiscal year 2012 appropriations bill would provide TSA with more than $550 million for explosive detection system procurement and maintenance. I would like to see if we can find creative ways to reduce that cost over time while still keeping the traveling public safe from acts of terrorism.

There are lots of good ideas out there, some of which TSA is engaged in already, and other proposals that we are hearing about from the private sector. I believe there are a variety of ways that we can better tap into and leverage the private sector to provide

technologies and services. There is a great innovation in the private sector, both among large and small businesses, and we need to do everything we can to foster that innovation. This includes streamlining and reforming acquisitions mechanisms within TSA and it also means finding new opportunities to entice industry, especially through greater transparency on the part of TSA, as to what its acquisition roadmap looks like.

The only way to reap the benefits of many businesses out there that have the solutions we need is, to the extent possible, let them know what TSA wants and when it wants it.

The TSA Authorization Act of 2011, just adopted by this subcommittee, is aimed at improving security by streamlining and eliminating burdensome regulations that are a barrier to job creation in the transportation industry and encouraging the use of technologies developed by the private sector.

This subcommittee hearing will continue to focus on the wise use of taxpayer dollars and job creation by examining TSA's technology procurement practices. I would like to see TSA fully engage the private sector in an open, transparent way for the development and purchase of security technologies. I would like to see progress on saving taxpayers' dollars and creating private sector jobs. I believe we can achieve this while effectively securing the traveling public and the flow of commerce. I look forward to hearing the witnesses' ideas for finding cost efficiencies and stimulating jobs through improved technology procurement at TSA.

[The statement of Chairman Rogers follows:]

PREPARED STATEMENT OF CHAIRMAN MIKE ROGERS

SEPTEMBER 22, 2011

I would like to welcome everyone to this important hearing and thank our witnesses for being here. We look forward to your testimony and greatly appreciate your time.

As part of our oversight of the Transportation Security Administration, one of the things we are looking to do is encourage good ideas that will stimulate job growth in the private sector. Given the hundreds of millions of dollars that the agency spends on technology procurement per year, I believe that TSA presents ample opportunity for generating any number of private-sector jobs.

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I believe there are a variety of ways that we can better tap into and leverage the private sector to provide technologies and services. There is great innovation in the private sector, both among large and small businesses, and we need to do everything we can to foster that innovation.

This includes streamlining and reforming acquisitions mechanisms within TSA. It also means finding new opportunities to entice industry, especially through greater transparency on the part of TSA as to what its acquisition roadmap looks like. The only way to reap the benefits of the many businesses out there that have the solutions we need is—to the extent possible—let them know what TSA wants and when it is going to want it.

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the development and purchase of security technologies. I'd like to see progress on saving taxpayer dollars and creating private-sector jobs. I believe we can achieve this all while effectively securing the traveling public and the flow of commerce.

I look forward to hearing the witness' ideas for finding cost efficiencies and stimulating the growth of jobs through improved technology procurement at TSA. With that I yield to the Ranking Member, Ms. Jackson Lee of Texas, for any opening statement she may have.

Mr. ROGERS. With that, I yield to the Ranking Member of the full committee, Mr. Thompson from Mississippi.

Mr. THOMPSON. Thank you very much, Mr. Chairman. I welcome our panel of witnesses to the subcommittee hearing today.

Under the Democratic majority, as you know, we held several hearings on the role of the Science and Technology Directorate, TSA's technology vetting and approval process, and the need for DHS to align research with its mission. I am pleased that the oversight begun under our watch continues today. As we conduct oversight and continue steps toward reform, let us assure that S&T has sufficient funding. As you know, S&T is in line to make a major cut to its budget in the fiscal year. Programs would need to be scaled back and promising projects may be eliminated. Mr. Chairman, I hope you can work with us to stop these drastic cuts.

Today's hearing will evaluate the Department's process to develop, procure, and deploy innovative technologies. It would have been helpful if we had had someone who currently works for the Department testify today. But I do look forward to hearing from Mr. Jackson and Ms. Duke, former Department employees. While they are unlikely to shed light on the current process, I hope they can shed light on the process used during their tenure.

Some experts have said the failure to employ an effective process led to the puffer machine fiasco. For those who may not recall, I want to take a moment to recount the puffer machine story. The Department purchased these high-tech checkpoint screening machines for about $150,000 each. We were told that the machines would spray a short puff of air on a passenger. The machine would then analyze the debris that fell from the passenger and determine whether the passenger had been near explosive material.

In the lab, the machine seemed to work. The maker promised that they would work. So TSA ordered 200 of them. However, in the real world, the machines were useless. They did not work. There was no way to make them work. After spending nearly $30 million to buy and maintain the nearly 100 puffer machines deployed, TSA finally retired these machines. At one time, these machines were touted as a high-tech response to aviation security. Now, they are sitting in a warehouse and we have wasted $30 million.

Why did this happen? It happened because the research, development, and testing of the technology was disconnected from the real-world use of the machines.

We cannot allow another incident of this kind to occur. Every dollar we waste on ineffective technology is a dollar that will not be spent to secure this Nation. The puffer machine fiasco happened while Mr. Jackson and Ms. Duke were at the Department. I look forward to hearing from them about how the system that was in place then allowed for the procurement of these machines.

In the last few months, the Obama administration has attempted to reform research, development, and procurement practices at S&T. I hope that Mr. Jackson and Ms. Duke will share with this committee the difficulties they found in their attempts at reform.

I look forward to hearing from our witnesses.

I yield back.

[The statement of Ranking Member Thompson follows:]

PREPARED STATEMENT OF RANKING MEMBER BENNIE G. THOMPSON

SEPTEMBER 22, 2011

Under the Democratic Majority, we held several hearings on:

- the role of the Science and Technology Directorate;
- TSA's technology vetting and approval process;
- the need for DHS to align research with its mission; and
- examining whether research fulfilled mission-critical needs of the components.

I am pleased that the oversight begun under our watch continues today. As we conduct oversight and consider steps toward reform, let us also assure that S&T has sufficient funding to do its job.

As you know, S&T is in line to take a major cut to its budget in the upcoming fiscal year. Programs will need to be scaled back and promising projects may be eliminated. Mr. Chairman, I hope you can work with us to stop these drastic cuts.

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We were told that the machine would spray a short puff of air on a passenger. The machine would then analyze the debris that fell from the passenger and determine whether the passenger had been near explosive materials. In the lab, the machines seemed to work. The maker promised that they would work. So TSA ordered over 200 of them.

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I look forward to hearing from them about how the system that was in place then allowed the procurement of these machines. In the last few months, the Obama administration has attempted to reform the research, development, and procurement practices at S&T. I hope that Mr. Jackson and Ms. Duke will share with this committee the difficulties they found in their attempts at reform.

Mr. ROGERS. I thank the Ranking Member.

We are very pleased today to have a distinguished panel of witnesses before us on this important topic. Elaine Duke is the principal of Elaine Duke and Associates, LLC. She provides acquisition and business consulting services to a wide variety of clients. She specializes in assisting companies in doing business with the Federal Government. Ms. Duke had 28 years with the Federal Government—she started at age 3—culminating with her Senate confirmation on June 27, 2008, as the Department of Homeland Secu-

rity's Under Secretary for Management. As the Under Secretary, she was responsible for the management of the Department's $47 billion budget. We don't use millions up here, apparently.

She previously served in several positions within the Department, including Deputy Under Secretary for Management and Chief Procurement Officer. Ms. Duke assisted in the stand-up of DHS while at the Transportation Security Administration, where she served as Deputy Assistant Administrator for Acquisition beginning in August 2002. Ms. Duke spent a great deal of her career with the U.S. Navy, and she has held various acquisition positions of progressive responsibility.

During her service with the Federal Government, Ms. Duke received the Presidential Meritorious Rank award, the DHS Secretary's Medal, and the Transportation Security Administration's Silver Medal for Customer Service, the Department of Army Commanders Award for Public Service, and the U.S. Coast Guard's Distinguished Public Service.

Ms. Duke, we are very proud to have you here today. You are recognized for your opening statement.

STATEMENT OF ELAINE C. DUKE, PRESIDENT, ELAINE DUKE & ASSOCIATES, LLC

Ms. DUKE. Good morning, Chairman Rogers and Members of the subcommittee. I am pleased to testify before the committee as it explores innovations in technology procurement to stimulate job growth.

Mr. Chairman, I would like to begin by thanking you for your leadership over the years as a key member of the Homeland Security Committee. Since I was first standing up acquisition at TSA, through my time as the Department of Homeland Security as Chief Procurement Officer, and then Under Secretary for Management, you and this committee have provided me tremendous support. I am truly grateful.

In this time of high unemployment, coupled with the debt ceiling crisis, each one of us must ask what can be done differently to contribute to economic recovery? The questions "What changes to the procurement process might stimulate job growth?" and "How can TSA improve efficiency and therefore save taxpayer dollars?" are important questions, and I thank you for letting me participate in this hearing.

I believe Federal procurement can play a role in stimulating job growth in the United States. There are several measures that can be taken to ensure DHS, TSA technology, and other acquisition programs maximize job growth as they meet mission needs in partnership with industry. The key to making this happen is to get the funds that are appropriated to TSA for acquisition programs out into awarded contracts to our industry partners quickly effectively and efficiency. There are several steps that can be taken to do this.

First, there must be the appropriate number of acquisition workforce personnel with the appropriate skill set to manage the acquisition programs. Now, more than ever, with flat and declining budgets, TSA must ensure that the acquisition workforce is properly positioned to manage its programs. That will ensure a couple of key features: First, that the requirement will be adequately de-

fined so industry can prepare proposals and perform effectively. Good requirements lead to good competition.

Second, the request for proposals and resulting contracts can be issued quickly and awarded without protest so the work can begin promptly and the industry partner can create and sustain jobs.

Third, is the Government's requirement will be met at the best price, with the appropriated funds not going to unnecessary overhead but to direct work in the related jobs. The acquisition program will deliver what the homeland security mission really needs.

There are several key initiatives that will help ensure the desired result. One is continuation of the DHS's acquisition workforce and its Acquisition Professional Career Program that provides a pipeline of acquisition professionals into the Federal workforce. Another is continued refinement of the functional integration authority over the departmental chiefs of the business lines. A third is the balancing of the Federal and acquisition workforce within DHS. There must be an appropriate balance of the Federal workforce and its industry partners. I don't believe there is a magic formula of percentage and number. The amount of the workforce and control is dependent on the size and criticality of the program.

An agency, regardless of its contractual relationship, must retain ownership and responsibility for being a good steward of the taxpayer dollars appropriated to that agency.

Another important aspect of using procurement to stimulate job growth is to ensure there is strong regular communications with industry. The Federal Acquisition Regulation provides guidelines for market research that allow extensive communications with industry throughout the acquisition process.

Taking maximum advantage of the communications not only makes for a better acquisition program, it helps industry by informing its business decisions. Bid and proposal decisions are critical in industry, and the cost to submit proposals for Federal procurements can be very high. Communications mutually inform so both parties—the U.S. Government and industry—can make the best, most precise, most efficient business decisions.

Third, acquisition strategies, budgets, and requirements can work together. The current 25-Point Implementation Plan to Reform Federal Information Technology Management, for instance, points out that for the technology initiatives, such as cloud computing and shared services to work, there must be strong acquisition management, and more importantly, there must be an alignment between the programs, the acquisition process, and the budget cycle.

Also, DHS, with TSA, must buy effectively and efficiently. That includes a robust strategic sourcing program and working towards the joint capabilities that are outlined in DHS's integrated strategy for high-risk management. Improved procurement can benefit and help the United States move towards its economic recovery.

I look forward to discussing this further through your questions. Thank you.

[The prepared statement of Ms. Duke follows:]

PREPARED STATEMENT OF ELAINE C. DUKE

SEPTEMBER 22, 2011

Chairman Rogers, Ranking Member Jackson Lee, and Members of the subcommittee, I am pleased to testify before the committee as it explores "Innovations in Technology Procurement to Stimulate Job Growth." Mr. Chairman, I'd like to begin by thanking you for your leadership over the years as a key member of the Homeland Committee. Since I was first standing up the acquisition function at TSA, through my time as Department of Homeland Security's Chief Procurement Officer and then Under Secretary for Management, you provided me tremendous support, and I am truly grateful.

In this time of high unemployment coupled with the debt ceiling crisis, each one of us must ask what can be done differently to contribute to economic recovery. The questions "What changes to the procurement process might stimulate job growth?" and "How can TSA improve procurement efficiency, and therefore save taxpayer dollars?" are important questions and I again thank the committee for calling this hearing to explore answers to these critical questions.

I believe Federal procurement can play a role in stimulating job growth in the United States. There are several measures that can be taken to ensure that DHS, TSA technology, and other acquisition programs maximize job growth as they meet mission needs in partnership with industry. The key is to get the funds that are appropriated to TSA for acquisition out into awarded contracts with industry partners quickly, effectively, and efficiently. There are several steps that can be taken to do this.

First, there must be the appropriate number of acquisition workforce personnel, with the appropriate skill set, to manage the acquisition programs. Now more than ever, facing flat and declining budgets, TSA must ensure that its acquisition workforce is properly positioned to manage its program. That will ensure several key features:

- The requirement will be adequately defined so industry can prepare proposals and perform most effectively. Good requirements lead to good competition.
- The request for proposals and resulting contracts can be issued and awarded quickly and without protest, so work can begin promptly and the industry partner can create and sustain jobs.
- The Government's requirement will be met at the best price, with the appropriated funds not going to unnecessary overhead, but to direct work and the related jobs.
- The acquisition program will deliver what the homeland security mission needs.

There are several initiatives that will help ensure the desired results are achieved.

- The DHS acquisition Workforce and its Acquisition Professional Career Program is providing a pipeline of new acquisition professionals into the Federal workforce. It is designed to provide both formal and on-the-job training and results in a well-qualified Federal acquisition workforce.
- The functional integration authority of the Departmental chiefs over the component functions must continue to be refined.
- A balancing of the Federal and contracting workforce within DHS. There must be an appropriate balance of Federal workforce and industry partners. There is no magic formula of percentage and number. The amount of Federal workforce and control is dependent on the size and criticality of a program. An agency, regardless of its contractual relationship, must retain the ownership and responsibility for being a good of steward of taxpayer dollars appropriated to that agency. Partnering with industry to perform the work is a key aspect of good stewardship, but accountability, at its core remains with the Federal agency. Critical functions should be performed with Federal employees to the extent required by the agency to maintain control of its mission. Once there are adequate Federal employees to control the critical functions (mission and operations), the work can be performed by private sector contractors, creating the properly balanced workforce and private industry job stimulation.

Second, is there must be strong, regular communications with industry. The Federal Acquisition Regulation provides guidelines for market research that allow extensive communications with industry. Taking maximum advantage of the communications not only makes for a better acquisition program, it also helps industry but informing its business decisions. Bid and proposal decisions are critical for industry, and costs to submit proposals for Federal procurements can be very high. Communications mutually inform so both parties—the U.S. Government and industry—so they can make the best, most precise, most efficient business decisions.

Third, acquisition strategies, budgets, and requirements must work together. The 25-Point Implementation Plan to Reform Federal Information Technology Management points out that for the technology initiatives, such as cloud computing, shared services, data centers to be effective, there must be strong acquisition management, the acquisition process must be aligned with the technology cycle, and the budget process must be aligned with the technology cycle. Industry will only partner with the Federal Government, and create jobs, if the business risk is appropriate. The Federal procurement system must, with industry engagement, develop acquisition strategies that deliver the technology solution with appropriately manageable financial, performance, and schedule risk.

Fourth, DHS, with TSA, must buy efficiently and effectively, thus enabling industry to operate efficiently and effectively. There are two facets to this point. The first is based around finding commonality in requirements within DHS missions and programs, and defining requirements and filling those requirements in a joint manner. DHS's Integrated Strategy for High Risk Management Implementation and Transformation, discusses the formation of Functional Coordination Offices and a Capabilities & Requirements Council among the key initiatives to increase DHS management integration. This will require a rationalization of requirements that will greatly contribute to effectiveness and efficiency in procurement. The second facet is that agencies must continue to use and grow strategic sourcing programs to procure goods and services more effectively. Strategic sourcing leverages the buying power of TSA, DHS, and the Federal Government.

Improved procurement not only provides economic benefit to our country in terms of effective use of tax dollars and job creation, it also helps ensure screening technologies actually make the traveling public safer. TSA must buy the right things at the right time for the right price to meet the homeland security threat, currently and as it evolves. The initial stand-up of TSA was focused on Federalizing the airports. As it matures, TSA must find the right mix of technology, people, and systems. A risk-based approach, facilitating freedom of movement of goods and people while providing adequate security for evolving threats against homeland security is a critical facet of the path forward. The approach must provide security for the present, while always anticipating and prepared to evolve to adapt to changes in threat and security technology.

Thank you for the opportunity to participate in your discussions regarding the ability of sound procurement to contribute to job growth and economic stability. I look forward to your questions.

Mr. ROGERS. Thank you. Next, we have Michael Jackson, President and founder of Firebreak Partners, LLC, a firm that designs, finances, and deploys high-value security technology networks to protect airports, seaports, and other critical infrastructure. Mr. Jackson has extensive experience in executive positions in both the private sector and Federal Government. From early 2005 through October, 2007, he was Deputy Secretary of the U.S. Department of Homeland Security. In this role, he was the Department's chief operating officer, with responsibility for managing day-to-day operations in DHS. Mr. Jackson served as Deputy Secretary to the U.S. Department of Transportation from May, 2001 to August, 2003.

His tenure there was particularly focused on DOT's response to 9/11 terrorist attacks, including creation of the new Transportation Security Administration and the management of the recovery efforts for the Nation's aviation industry. Mr. Jackson also held positions working for Presidents George H.W. Bush and Ronald Reagan. In addition, Mr. Jackson has worked at a number of private technology corporations. He has been a researcher at the American Enterprise Institute, and taught political science at the University of Georgia and Georgetown University.

Mr. Jackson, thank you for being here. We look forward to your testimony. You are recognized.

STATEMENT OF MICHAEL P. JACKSON, PRESIDENT, FIREBREAK PARTNERS, LLC

Mr. JACKSON. Good morning, Mr. Chairman. Thank you very much for having me here today. Ranking Member Thompson, thank you for being with us this morning. I appreciate your presence as well and the opportunity to talk about TSA and the topic of this hearing.

Technology, obviously, is a vital component of TSA's success and its mission. Congress has generously funded billions of dollars in technology for this agency over the decade following the attacks of 9/11. Over that period, TSA has made substantial progress. Yet today, simple procurement tools and technologies could deliver meaningful budget savings and improved security. Moreover, with Congressional approval and with no additional cost to the taxpayers, TSA could also easily increase the number of jobs in America, and do so relatively quickly, particularly with simple affirmation of alternative financing. My written testimony provides additional material about all of these ideas. But I have essentially focused on four points. I would like to today summarize those four points by way of introduction.

First, the first recommendation I would have is to authorize alternative financing and operating lease agreements as proposed to TSA by public commercial airport authorities. These transactions would leverage private sector capital to acquire and maintain security technology for inline baggage systems, checked baggage inspection, passenger checkpoint screening, and other associated technology needs.

TSA faces just a formidable array of needs for the technology to do its work to get operating efficiencies and to do their screening tasks more effectively.

I would argue or suggest that Congress should consider authorizing TSA—even better, instructing TSA—at least to experiment and adopt alternative financing transactions. There are multiple ways to structure these types of transactions that would bring capital that could attract literally billions of dollars into this important need for airports and TSA. My testimony explains in more detail, for example, a proposal from two airports that would have leveraged approximately $198 million in private sector investment to support TSA. TSA rejected the proposal a few months ago because its staff thought it lacked statutory authority to exercise an appropriate operating lease arrangement with these airport authorities.

The second recommendation is to privatize DHS's transportation security lab certification testing for explosive detection equipment, as has been pioneered by the European Union. The process that DHS uses for certification testing for explosive detection needs rethinking, it needs your focus, it needs your attention and examination. The current process is unnecessarily expensive, both for taxpayers and for vendors who use the system. It is excessively time-consuming and the process for obtaining approvals lacks clarity, transparency, the resources, and adequate institutional capacity for making this happen more quickly. The E.U. governments have successfully privatized this function. My written testimony explains why that should be considered here in the United States.

The third recommendation I would like to lay on the table is for TSA to create a TSA version of an "X-Prize" by replacing at least some of TSA's traditional R&D equipment funding with results-based achievement testing awards. Such awards can stimulate breakthrough innovations in checkpoint and checked baggage screening, and better leverage private investment.

Pure and simple, we should at least look at some technology incentive investments that reward getting the job done rather than making promises for a job to be done.

The final recommendation is insist that any new core explosive detection imaging system—CT, AT, AIT, trace detection, these types of tools—that are sold to TSA, after some reasonable date to be determined must have presented image data outputs in an open source format. In addition, requiring manufacturers to provide sufficient software transparency to allow TSA the option to develop modular common-use apps routinely that could help upgrade the software. This is a big problem. The GAO has done a good report recently on this topic.

This type of thing is not hard to do. I thought when I was at DHS that it was a good idea. I gave a speech for it. It immediately met with a resounding reaction from the vendor community. They just hated it. It is understandable. But I would just urge you to dig into this topic because it is really something that has transformed the medical community and can transform TSA operations.

In conclusion, these four authorizations seem, in a way, disarmingly simple or small-bore things perhaps, but together they offer specific systemic procurement reform as regards to TSA technology acquisition and promise transformational change for the agency.

I thank you and look forward to your questions.

Mr. ROGERS. I thank you.

[The prepared statement of Mr. Jackson follows:]

PREPARED STATEMENT OF MICHAEL P. JACKSON

SEPTEMBER 22, 2011

Good morning Chairman Rogers, Ranking Member Jackson Lee, and distinguished Members of the subcommittee. I appreciate the opportunity to appear before you today and to share some thoughts about the Transportation Security Administration (TSA) and the important topic of this hearing.

Technology is a vital component of TSA's mission and essential to its success. Congress has generously funded billions of dollars in technology for this agency over the decade following the attacks of 9/11. The topic of this hearing suggests two introductory, orienting questions:

- Can further innovations at TSA regarding technology acquisition allow the agency to reduce cost while improving security?
- Can TSA's technology investments be structured to maximize job creation in these difficult economic times?

The answer to both is clearly yes. Tools to deliver budget reductions and better security are readily available. Moreover, with Congressional approval—and with no additional cost to taxpayers—TSA could also easily increase the number of jobs in America, and do so relatively quickly.

As a private citizen, I offer four recommendations for Congressional action that can significantly advance the objectives being explored by today's hearing:

1. Authorize "alternative financing" operating lease agreements as proposed to TSA by public commercial airport authorities. These transactions would leverage private sector capital to acquire and maintain security technology for in-line baggage systems, checked baggage inspection, passenger checkpoint screening and potentially other needs.

2. Privatize the DHS's Transportation Security Lab certification testing for explosive detection equipment, as has been pioneered in the European Union.
3. Create TSA's version of an "X-Prize" by replacing at least some of TSA's traditional R&D equipment funding with results-based achievement awards. Such awards can stimulate breakthrough innovations in checkpoint and checked bag screening, and better leverage private investment.
4. Insist that any new core explosive detection imaging systems (CT, AT, AIT, and the like) sold to TSA after a reasonable date certain generate image data outputs in an open-source format. Additionally, require manufacturers to provide sufficient software transparency to allow TSA the option to develop modular, common-use aps for routinely upgrading explosive detection algorithms for its entire network of detection systems.

What follows offers a few words about each of these recommendations. My purpose is not to explore any single one in great depth, instead to provide a high-level summary that can guide further assessment by the subcommittee, if of interest.

Alternative Financing Agreements.—TSA faces a formidable array of financial demands to fuel its critical technology needs. The single most expensive category of investment has been in-line checked baggage inspection systems. These investments clearly improve security and airport operations, diminishing delays, and passenger inconvenience.

With each efficient in-line baggage system, TSA also typically generates meaningful cost savings for its own operation—for its capital budgets, because TSA purchases fewer explosive detection systems (e.g., EDS and trace detection) and for operational budgets because TSA achieves greater personnel efficiency, increased screening throughput, lower maintenance, fewer consumables and reduced energy consumption. These TSA savings often total millions of dollars annually, even at a mid-sized airport.

Although TSA has a large backlog of in-line checked baggage system projects that have been funded but not completed, there remains a large backlog of unfunded in-line system needs that will require more billions of dollars and many years to eliminate.[1] TSA has been chasing this backlog since 2002. In fact, some of the expensive projects initially funded by TSA must now regrettably be upgraded to accommodate today's requirements for higher-speed screening technology.

Aside from in-line baggage system investments, TSA is also juggling numerous other formidable capital needs for technology. These include checkpoint equipment modernization, exit lane breach control (for which effective technology is available to allow reassignment of guards who now stand watch at exit lanes), risk-based screening infrastructure, credential validation systems, efficient physical security device management (for cameras, video recorders, door locks, etc.), multiplexing of threat detection imaging for more efficient and effective review remotely (TSA has recently published a Request for Information seeking technologies that can make this happen), and more.

For the next several years, TSA's capital budgets will face a particular squeeze in order to recapitalize its first-generation EDS machines and related technologies, which are now reaching the end of anticipated service life. It is simply not practical to fund all of TSA's needs with a business model that continues to ask Congress to write such large checks. Yet absent investment, better security, greater efficiency, TSA cost reductions and customer service improvements will be deferred.

Alternative financing can and should play a role in meeting TSA mission needs. There are multiple business models that work, and there will be many airports willing to engage with TSA creatively, if allowed. These solutions don't require complex tax code changes or exotic and risky financing structures. They would simply leverage the way airports for decades have done business.

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[1] Congress and the administration have allocated a great deal of cash to this problem, especially during the last 2 years. Yet the number of priority airports (TSA's Category X–III targets) that are still not fully funded remains large. TSA's fiscal year 2012 Congressional Budget Justification reports that only 187 of the 286 largest airports (CAT X–III) will have CBIS systems completed for the entire airport at the end of fiscal year 2011 (p. A–23). The fiscal year 2011 Budget Justification predicted that TSA would not reach 100 percent coverage even for the largest airports until 2018 (p. AS–30). Some airports lack capacity to fund projects effectively under TSA's current business model. Those airports are, in many cases, not yet even in the early stages of TSA's project funding queue. Moreover, several of the more expensive projects completed early after 9/11 have failed by a notable margin to meet the minimum throughput standards that TSA set for such systems (~400 bags per hour) and would need almost wholesale replacement to support even the currently certified medium-capacity EDS machines, let alone the higher-capacity EDS machines that could improve performance and further reduce TSA capital and operating expenses at those airports.

But to jump-start this common-sense investment, Congress must authorize TSA—even better, instruct TSA—at least to experiment in adopting alternative financing transactions. By legislatively cutting through one or two project scoring nits that are perceived by TSA staff to be impediments, Congress can make it possible for TSA to negotiate operating leases for security technology, just as TSA does today with regard to leasing office space and obtaining other essential services from airports Nation-wide. TSA authorizing legislation would simply recognize affirm the unique dependencies that exist between TSA and airport authorities, allowing government-to-government alternative financing transactions to be funded, especially at today's unprecedented favorable rates.

Sensible alternative financing can literally attract billions of dollars of investment from the private sector. Not 2 or 3 years from now. Now. This approach can facilitate many airport in-line baggage system improvement projects, which can easily be completed at lower cost and in less than half the time required to complete an identical project funded with TSA's existing procurement model. Putting Americans to work and supporting TSA's mission. I'll give a quick overview of one approach with which I have been personally involved.

In September of last year two airport authorities—supported by Delta Air Lines, Southwest Airlines, the Vic Thompson Company (arguably the leading U.S. engineering firm specializing in aviation security project work) and my firm—formally proposed two alternative financing lease agreements to TSA. We had others ready to follow. These first two transactions together offered an estimated $198 million in private-sector investment to design, purchase, and maintain in-line baggage systems, explosive detection equipment, and checkpoint modernization technology.

As proposed, at each airport, the airport authority would make the screening technology and infrastructure needed by TSA available to the agency through a multi-year services agreement (the proposed term was 8 years). Screening systems currently operated by TSA (or regulated in any way by TSA) would, of course, meet all TSA performance standards, relevant equipment certifications and operational requirements.

The two transactions were part of a proposed new pilot program of security investments, which the offerors called the Next Stage Investment (NSI) program.

NSI does not contemplate any change regarding existing operational roles and obligations at the airport. TSA would, for example, still be responsible for operating or overseeing private sector operations regarding checked bag and checkpoint screening. By pilot testing an alternative to TSA's existing buy-own-maintain business model, TSA can gain remarkable advantages, while preserving all of its inherently Governmental discretion and operational control.

The NSI program is not an ordinary commercial enterprise; rather, it is a government-to-government agreement that leverages private sector skills in support of a compelling public interest. NSI can substantially improve aviation security—and do so much more quickly, at a lower project cost and more comprehensively than can be achieved using TSA's existing business model for infrastructure investment. The offerors are convinced that their alternative financing pilot program provides a compelling value proposition for TSA and the aviation industry.

NSI would generate well-paying jobs and other near-term economic activity with its technology purchases, project design, construction and private sector program management. Monthly fees to be paid by TSA under the services agreement would not begin until after system acceptance. In other words, NSI transactions would truly be quick-start projects. Because TSA does not have to obligate funds up front to get an NSI project off the ground, they offer a very efficient way to reduce the backlog of TSA project needs without imposing on Congress for large capital budget appropriations. A way to pilot test technology innovations of all sorts.

The offerors can prove that the proposed NSI projects are sound financial investments for TSA—reducing overall project costs, decreasing the number of TSA employees needed for on-going screening operations and reducing overhead costs at TSA headquarters. NSI projects can considerably reduce TSA's dauntingly large backlog of near-term technology investment needs. They can smooth investment spikes and increase flexibility to pay for what will otherwise be large capital budget needs for years ahead. Many of the savings achieved drop straight to TSA's bottom line, generating annual saving each year ahead.

Such alternative financing tools can help DHS and Congress balance the need to reduce Federal budget outlays while meeting DHS mission needs. The NSI and other alternative financing approaches proposals therefore raise transactional policy issues that are strategically significant for the long-term success of TSA and to DHS overall. In sum, the NSI program constitutes a potentially transformational business model for acquisition and maintenance of aviation security technology.

So what happened with the two proposals? TSA staffers reviewed them and decided that the transactions would have to be scored as a capital lease rather than an operating lease, thus making the transaction unworkable. This was based on a conservative interpretation of OMB Circular A–11 (Appendix B), one that I would invite Members to review. However, a simple legislative waiver allowing TSA to accept proposals for such transactions would, I'm convinced, unlock very considerable benefits for TSA.

2. Privatize the DHS's equipment certification testing.—The process within DHS for providing certification testing for explosive detection systems needs re-thinking. Today, the Transportation Security Laboratory (TSL), a part of the DHS Science and Technology Directorate, conducts such certification testing for TSA. A legacy FAA organization, TSL is home to many highly talented individuals, men and women who do work that is essential to DHS's mission. Certification testing is not a task that needs to remain on their plate.

The current process is unnecessarily expensive, both for the taxpayers and for vendors seeking certification of devices. It is excessively time-consuming and the process for obtaining approvals lacks clarity, transparency, resources, and an adequate institutional capacity for working more quickly.

The gauntlet through which equipment manufacturers must navigate is dispersed to several different testing locations. Vendors must often guess at the requirements for success. If a firm is trying, for example, to get a new EDS machine certified it starts with something called certification readiness testing. Later, it ships a prototype machine to TSL's Atlantic City, New Jersey facility. There it undergoes testing with military and commercial explosives. Much of the actual work supporting certification is done by TSL-contracted labor. In addition, the firm has to send another prototype to Tyndall Air Force Base in Florida for testing with more exotic and unstable threat materials. Tyndall then sends their data and images up to New Jersey for review. If successful, the applicant has to send a prototype machine for integration testing to a facility outside of Washington, DC, and later elsewhere for operational testing in an actual airport environment.

If you fail at any stage (certification testing is appropriately binary; miss something on the extensive test-list and you fail), you pull out, try to fix the problems and ask for a spot in the busy queue to start over. In short, the process is unnecessarily bureaucratic—and a substantial impediment to innovation. I have spoken over the last 3 years with numerous successful venture capital investors who fund various security start-ups or early stage businesses. Most of them won't even go near any investment that has to end up subjected to this certification process. That's a market-driven recognition that this essential process is too much cloaked in mystery, delay, and excessive cost. In short, too often the process unintentionally squelches innovation.

What would an alternative process look like? First, TSL and TSA would still be responsible for formulating and promulgating the performance standards that any particular class of equipment (AIT, checked baggage inspection, checkpoint bag inspection, trace detection, etc.) must meet. That is an inherently Governmental task. Performance standard-setting should be a collaboration that brings together technologists with TSA and DHS intelligence analysts. It is the military and intelligence community that is continuously gathering relevant field information. Getting enough clarity to outsource testing will almost certainly make for more rigorous, adaptable, and transparent standards.

Then, DHS would design and conduct a procurement to select one or (ideally) two vendors. The winners would receive multi-year charters to establish integrated professional teams qualified to do the testing. There should be greater transparency about the performance standards for testing. Like an Underwriters Laboratory does in other areas. The National Labs, non-profits such as Battelle or MITRE, some university labs, and various for-profit corporations have the basic program capabilities needed. The certification testing would be provided to industry on a fee-for-service basis. If the Government likes, DHS could take half of what it currently spends on this task and buy down the retail testing cost with a subvention for the testing lab(s). Or take part of that cost savings and apply those funds to results-based achievement awards (see below).

With private lab, if a particular machine fails a test, it might not be necessary to withdraw altogether and re-schedule. Perhaps the same lab might also become a center of expertise that could help both fledgling entrepreneurs and established corporations improve the products. That's not appropriate or possible if DHS is doing the testing. It is a given that such labs would be appropriately trained and resourced, and routinely audited by DHS.

In the end, the testing lab would make a recommendation for a certification to TSA, which would still own that final decision.

This model has been adopted within the European Union (EU) and it works well. There are four E.U. labs that provide comparable certification testing in Europe—they are located in France, the United Kingdom, Germany, and Holland. The latter two are privately-owned facilities.

Why is this important? Because the threats are real, and we owe it to TSA to put in place the best possible package of incentives to spur aggressive innovation by the private sector. A more efficient certification process should be part of such an incentive package.

3. Results-based achievement awards.—Ten years into TSA's life, it is worth the effort for Congress and TSA to engage in a fresh dialogue about how best to structure TSA's research grant program for new technologies. To date, DHS has devoted considerable dollars to various development grants or R&D grants for firms working on what seem to be promising avenues of study. These grants kept some struggling firms in the hunt. Even still, only some TSA investments proved successful, others were duds.

Alternatively, I'm convinced that a results-oriented award program for winning technologies would offer more effective incentives, especially when paired with a more transparent and swift certification process. TSA needs the functional equivalent of a permanent X-Prize. This would offer a ring to chase, notoriety to be won, and cash to be awarded if you are the first (or perhaps also the second) to obtain certification for a breakthrough technology.

If we had offered such a grant in 2008 or 2009 for an AT machine that accurately identified liquid explosives in a carry-on bag, the loathed "3–1–1 rule" might today be history.

These prizes would be meaningful only if they were rewards for taking security to a noticeably higher level, not for incremental change. A given prize should be large enough to constitute a reward and an incentive. TSA should pay more if the private sector delivers results faster. Achieving a TSA-endorsed goal might be worth a fixed amount if delivered in, say, 2 years. But perhaps twice as much, if delivered in one. I can imagine that a non-profit foundation might be formed with public contributions to support TSA by matching, for example, a given string of awards.

A prize would perhaps also help to re-align how investors in new technology view the homeland security technology market. In essence, this is simply a suggestion to look closely at how grant incentives are awarded today, and ask if they might, at least in part, be better based also on rewards for performance, not just promises.

I have no clue what Administrator Pistole's lawyers or his procurement chief would say about whether TSA has the legal authority to do this. But if the specific authorization were to come from Congress, this subcommittee would certainly be a good place to get the ball rolling.

4. Open source data, image standards and a TSA app factory.—In an earlier life in the public sector, I became convinced that this final recommendation was potentially transformational. So I gave a speech about it one day at a large industry gathering. It quickly evoked a reaction from TSA's technology vendor community: They hated it.

Members of this subcommittee may get the same reaction. Still, I think it is worth insisting on this legislatively, in some way or another.

What is the basic recommendation? To give TSA the mandate to insist that any new core explosive detection imaging equipment (CT, AT, AIT, and the like) sold to TSA after a reasonable date certain must compile its image data outputs in an open-source format (format to be determined). Moreover, the manufacturers should be required to provide such additional software transparency as required to allow TSA to develop and deploy modular, common-use apps that would routinely upgrade explosive detection algorithms in its equipment.

In July of this year the Government Accountability Office published an insightful report that is germane to this suggestion.[2] It explains the extraordinary complexity of the job of implementing needed configuration management and software upgrades for TSA's inventory of EDS equipment and other screening devices, such as electronic trace detection. There are at least two big parts to this problem. The first is keeping up with what is known about terrorist bomb-making innovations. Of course, TSA has the on-going obligation to convert intelligence about those threats into equipment performance standards and operational protocols. But the second problem is that all of TSA's explosive detection equipment runs with proprietary

[2] United States Government Accountability Office, *Aviation Security: TSA Has Enhanced Its Explosive Detection Requirements for Checked Baggage, but Additional Screening Actions Are Needed* (Washington, July 2011), GAO–11–740.

software, which TSA has virtually no ability to control once it has bought one of these long-life tools.

So if TSA needs a specific software change, they are at the mercy of getting it from a welter of original manufacturers. I'd vouch for that community to say there is an enormous reservoir of professionalism in the manufacturing community. A commonality of interest. But not perfect alignment. TSA is more or less at the mercy of each manufacturer of its legacy screening equipment to design and implement system modifications as needed. Of course, TSA is expected to pay for any such changes. The changes themselves and the costs are usually not trivial. The GAO report shed light on some of the problems regarding this process, both at TSA and among the vendors.

These circumstances are not unlike what existed with owners of cellular phones prior to introduction of the iPhone, and later its competition. By making the core software that ran these gizmos open-source, Apple empowered individuals with specific interests to write their own apps. When a lot of people wrote apps, those innovations began to cascade, redefining what was possible and therefore what tools users could expect. In recent years, the medical community has made a similar, dramatic progress in standardizing software protocols for essential diagnostic and business tools.

TSA finds itself with identical needs with respect to their imaging technology providers. Changing the status quo would not be easy, but dividends are large. In each case, the software component of a given machine is a vendor's secret sauce. So that makes for an untidy stew at TSA. On the other hand, if there were greater openness and standardization with software across these systems, that would enable greater flexibility and creativity. It would allow TSA to retain an outrageously talented team to do configuration management and to support innovation, matching the pace of threat changes in the real world. This would take a bit of time and a lot more detailed planning, but again, it would offer a transformational responsiveness and strengthen homeland security.

In close, I'd like again to thank the Members of the subcommittee for affording me the time to present these four ideas. Taken together, they constitute a cluster of tools that could give TSA remarkable new capabilities to spur innovation, acquire and utilize technology, and create economic opportunity.

Mr. ROGERS. Next, we have Steve Lord. He is the GAO executive responsible for directing GAO's numerous engagements on the aviation surface transportation issues and regularly discusses these issues before Congress and at industry forums. He has recently conducted in-depth reviews of TSA's of passenger checked baggage and air cargo screening programs, which led to significant improvements at TSA's operations. Before his appointment to senior executive service in 2007, he led GAO's work on a number of key international security, finance, and trade issues. Mr. Lord has received numerous GAO awards for meritorious service and outstanding achievement.

Mr. Lord, we appreciate your presence before this committee and on the many occasions you have been here, and look forward to your testimony.

You are recognized.

STATEMENT OF STEPHEN M. LORD, DIRECTOR, HOMELAND SECURITY, GOVERNMENT ACCOUNTABILITY OFFICE

Mr. LORD. Thank you, Mr. Chairman. I am pleased to be here today to discuss TSA's progress and related challenges in not only developing but fielding new technology. As you and Representative Thompson have indicated, these programs represent billions of dollars in life-cycle costs. This is obviously a very important issue.

What I would like to do today is summarize some of the key insights gleaned from our recent work in this area related to DHS and TSA acquisition. They are in the three following areas: Our work has emphasized the importance of, No. 1, developing clear

program requirements; our work has also demonstrated the importance of testing and conducting oversight of the acquisition process; and third, our work also has highlighted the importance of conducting cost/benefit analysis to guide your acquisition and deployment decisions.

Regarding the first point, requirements, our past work has highlighted the importance of setting clear requirements up front. Otherwise, you have difficulty further in the process in achieving successful outcomes and you run the risk of increasing the costs of your programs if it is unclear what you are trying to achieve. For example, in June, 2010, we reported that over half of the 15 DHS programs we reviewed in detail lacked documented approval of key planning, requirement setting, and program baseline documents. These are all very important planning steps that you need to conduct up-front to ensure you have good outcomes.

Regarding TSA, we also found that TSA faced similar challenges in identifying and meeting requirements in some programs. For example, in July, a few months ago, we reported that TSA revised it is checked baggage explosive detection requirements in January of this year, which we view as a good thing to better detect new threats. However, while the specific numbers are sensitive security information, some of the current machines are configured to detect explosives at the 2005 levels while the other machines are configured to detect explosives at the 1998 levels.

So we recommended, given the disparities between the current requirements and the current capabilities, we recommend that TSA develop an action plan to better ensure new and deployed equipment meets current requirements. TSA agreed with our recommendation and has begun to take appropriate steps.

In a recent report, we also recommended that TSA establish a better process for communicating with the vendor community, these are issues that Mr. Jackson and Ms. Duke previously raised, such as through industry days and kickoff meetings. This has been a reoccurring issue. We identified similar communication issues in our 2009 report.

Regarding testing, our prior work has identified several challenges which can lead to problems down the road in achieving desired incomes. For example, we recently reported on the role played by S&T's test and evaluation and standards office. This is an important development. TSA stood this office up to ensure proper testing at the component level. We found it could do a better job in reviewing and approving the testing agents conducting testing across DHS.

Another testing issue we identified is related to our July checked baggage screening report. We found TSA was trying to collect explosives test data as the same time as it was procuring new baggage screening machines. This is not to say it couldn't be done. This major strategy is a higher risk. We found that this led to some delays in the acquisition process. Thus, we recommended that TSA collect the needed data before starting the procurement process for new machines and upgrades.

In the earlier report, and as previously referenced by Representative Thompson, we found that TSA deployed explosive trace portals, or puffers, before they demonstrated reliable performance in

an airport environment. As a result of this setback, TSA has agreed and changed their processes to better test new technology before deploying it to airports.

Finally, our prior work has shown that cost/benefit analysis can be a useful tool when making acquisition decisions. The good news is that in June of this year, in response to these and other reports, the Department has reported taking steps to strengthen its investment and acquisition process. But as we reported earlier, it is too soon to tell whether this is going to have the desired effect.

Mr. Chairman, this concludes my statement. I look forward to any questions you may have.

[The prepared statement of Mr. Lord follows:]

PREPARED STATEMENT OF STEPHEN M. LORD

SEPTEMBER 22, 2011

GAO HIGHLIGHTS

Highlights of GAO–11–957T, a testimony to the Subcommittee on Transportation Security, Committee on Homeland Security, House of Representatives.

Why GAO Did This Study

Within the Department of Homeland Security (DHS), the Transportation Security Administration (TSA) is responsible for developing and acquiring new technologies to address homeland security needs. TSA's acquisition programs represent billions of dollars in life-cycle costs and support a wide range of aviation security missions and investments including technologies used to screen passengers, checked baggage, and air cargo, among others. GAO's testimony addresses three key challenges identified in past work: (1) Developing technology program requirements, (2) overseeing and conducting testing of new technologies, and (3) incorporating information on costs and benefits in making technology acquisition decisions. This statement also addresses recent DHS efforts to strengthen its investment and acquisition processes. This statement is based on reports and testimonies GAO issued from October 2009 through September 2011 related to TSA's efforts to manage, test, and deploy various technology programs.

What GAO Recommends

GAO is not making any new recommendations. In prior work, GAO made recommendations to address challenges related to deploying EDS to meet requirements, overseeing and conducting testing of new technologies, and incorporating information on costs and benefits in making technology acquisition decisions. DHS and TSA concurred and described actions underway to address the recommendations.

HOMELAND SECURITY: DHS AND TSA ACQUISITION AND DEVELOPMENT OF NEW TECHNOLOGIES

What GAO Found

GAO's past work has found that TSA has faced challenges in developing technology program requirements on a systemic and individual basis. Program performance cannot be accurately assessed without valid baseline requirements established at the program start. In June 2010, GAO reported that over half of the 15 DHS programs (including 3 TSA programs) GAO reviewed awarded contracts to initiate acquisition activities without component or Department approval of documents essential to planning acquisitions, setting operational requirements, or establishing acquisition program baselines. At the program level, in July 2011, GAO reported that in 2010 TSA revised its explosive detection systems (EDS) requirements to better address current threats and plans to implement these requirements in a phased approach. However, GAO reported that some number of the EDSs in TSA's fleet are configured to detect explosives at the levels established in the 2005 requirements and TSA did not have a plan with time frames needed to deploy EDSs to meet the current requirements.

GAO has also reported DHS and TSA challenges in overseeing and testing new technologies. For example, in July 2011, GAO reported that TSA experienced challenges in collecting data on the physical and chemical properties of certain explo-

sives needed by vendors to develop EDS detection software and needed by TSA before procuring and deploying EDSs to airports. TSA and DHS Science and Technology Directorate have experienced these challenges because of problems associated with safely handling and consistently formulating some explosives. The challenges related to data collection for certain explosives have resulted in problems carrying out the EDS procurement as planned. In addition, in October 2009, GAO reported that TSA deployed explosives trace portals, a technology for detecting traces of explosives on passengers at airport checkpoints, in January 2006 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. In June 2006, TSA halted deployment of the explosives trace portals because of performance problems and high installation costs.

GAO's 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. GAO has reported that TSA has not consistently included these analyses in its acquisition decisionmaking.

In June 2011, DHS reported that it is taking steps to strengthen its investment and acquisition management processes by implementing a decision-making process at critical phases throughout the investment life cycle. The actions DHS reports taking 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.

Chairman Rogers, Ranking Member Jackson Lee, and Members of the subcommittee: I am pleased to be here today to discuss our past work examining the Transportation Security Administration's (TSA) progress and challenges in developing and acquiring new technologies to address homeland security needs. TSA acquisition programs represent billions of dollars in life-cycle costs and support a wide range of aviation security missions and investments including technologies used to screen passengers, checked baggage, and air cargo, among others. Within the Department of Homeland Security (DHS), the Science and Technology Directorate (S&T) has responsibility for coordinating and conducting basic and applied research, development, demonstration, testing, and evaluation activities relevant to DHS components, which also have responsibilities for developing, testing, acquiring, and deploying such technologies. For example, 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 property.

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 TSA'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) overseeing and conducting testing of new technologies, and (3) incorporating information on costs and benefits in making technology acquisition decisions. This statement will also discuss recent DHS and TSA efforts to strengthen its investment and acquisition processes.

This statement is based on reports and testimonies we issued from October 2009 through September 2011 related to TSA's efforts to manage, test, and deploy various technology programs.[1] 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.

BACKGROUND

The Aviation and Transportation Security Act (ATSA) established TSA as the Federal agency with primary responsibility for securing the Nation's civil aviation

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

system, which includes the screening of all passenger and property transported from and within the United States by commercial passenger aircraft.[2] In accordance with ATSA, all passengers, their accessible property, and their checked baggage are screened pursuant to TSA-established procedures at the 463 airports presently regulated for security by TSA. These procedures generally provide, among other things, that passengers pass through security checkpoints where they and their identification documents, and accessible property, are checked by transportation security officers (TSO), other TSA employees, or by private-sector screeners under TSA's Screening Partnership Program.[3] Airport operators, however, also have direct responsibility for implementing TSA security requirements such as those relating to perimeter security and access controls, in accordance with their approved security programs and other TSA direction.

TSA relies upon multiple layers of security to deter, detect, and disrupt persons posing a potential risk to aviation security. These layers include behavior detection officers (BDOs), who examine passenger behaviors and appearances to identify passengers who might pose a potential security risk at TSA-regulated airports;[4] travel document checkers, who examine tickets, passports, and other forms of identification; TSOs responsible for screening passengers and their carry-on baggage at passenger checkpoints, using X-ray equipment, magnetometers, Advanced Imaging Technology, and other devices; random employee screening; and checked-baggage screening systems.[5]

DHS's Science and Technology Directorate (S&T) and TSA have taken actions to coordinate and collaborate in their efforts to develop and deploy technologies for aviation security. For example, they entered into a 2006 memorandum of understanding for using S&T's Transportation Security Laboratory, and they established the Capstone Integrated Product Team for Explosives Prevention in 2006 to help DHS, TSA, and the U.S. Secret Service to, among other things, identify priorities for explosives prevention.

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

Our past work has found that technology 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.[6] 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, or establishing acquisition program baselines.[7] For example, TSA's Electronic Baggage Screening Program did not have a Department-approved program baseline or program requirements, but TSA is acquiring and deploying next-generation explosive detection technology to replace legacy systems. We made a number of recommendations to help address issues related to these procurements 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 TSA 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

[2] See Pub. L. No. 107–71, 115 Stat. 597 (2001). For purposes of this testimony, "commercial passenger aircraft" refers to a U.S.- or foreign-based air carrier operating under TSA-approved security programs with regularly scheduled passenger operations to or from a U.S. airport.

[3] Private-sector screeners under contract to and overseen by TSA, and not TSOs, perform screening activities at the 16 airports participating in TSA's Screening Partnership Program as of July 2011. See 49 U.S.C. § 44920.

[4] TSA designed the Screening Passengers by Observation Techniques program to provide BDOs with a means of identifying persons who may pose a potential security risk at TSA-regulated airports by focusing on behaviors and appearances that deviate from an established baseline and that may be indicative of stress, fear, or deception.

[5] Advanced Imaging Technology screens passengers for metallic and nonmetallic threats including weapons, explosives, and other objects concealed under layers of clothing.

[6] 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.

[7] GAO, *Department of Homeland Security: Assessments of Selected Complex Acquisitions,* GAO–10–588SP (Washington, DC: June 30, 2010). Three of 15 were TSA programs.

requirements in a phased approach.[8] However, we reported that some number of the 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.[9] DHS concurred with our recommendation and has begun taking action to address them; for example, DHS reported that TSA has developed a plan to evaluate its current fleet of EDSs to determine the extent to which they comply with these requirements. However, our recommendation is intended to ensure that TSA operate all EDSs at airports at the most recent requirements. Until TSA develops a plan identifying how it will approach the upgrades for currently deployed EDSs—and the plan includes such items as estimated costs and the number of machines that can be upgraded—it will be difficult for TSA to provide reasonable assurance that its upgrade approach is feasible or cost-effective. Further, while TSA's efforts are positive steps, it is too early to assess their effect or whether they address our recommendation.

- 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.[10] 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 their functional requirements in an operational environment. TSA agreed with this recommendation. However, communications issues with the business community persist. In July 2011, we reported that vendors for checked-baggage screening technology expressed concerns about the extent to which TSA communicated with the business community about the current EDS procurement.[11] TSA agreed with our July 2011 recommendation to establish a process to communicate information regarding TSA's EDS acquisition to EDS vendors in a timely manner and reported taking actions to address it such as soliciting more feedback from vendors through kickoff meetings, industry days, and classified discussions of program requirements.

DHS AND TSA HAVE ENCOUNTERED CHALLENGES IN OVERSEEING AND TESTING NEW TECHNOLOGIES

Our prior work has also shown that not resolving problems discovered during testing can sometimes lead to costly redesign and rework at a later date. Addressing such problems before moving to the acquisition phase can help agencies better manage costs. Specifically:

- In June 2011 we reported that S&T's Test & Evaluation and Standards Office, responsible for overseeing test and evaluation of DHS's major acquisition programs, reviewed or approved test and evaluation documents and plans for programs undergoing testing, and conducted independent assessments for the programs that completed operational testing.[12] DHS senior-level officials considered the office's assessments and input in deciding whether programs were ready to proceed to the next acquisition phase. However, the office did not consistently document its review and approval of components' test agents—a Government entity or independent contractor carrying out independent operational testing for a major acquisition. In addition, the office did not document its review of other component acquisition documents, such as those establishing programs' operational requirements. We recommended, among other things, that

[8] GAO, *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).

[9] GAO–11–740. 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.

[10] GAO, *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).

[11] GAO–11–740.

[12] GAO, *DHS Science and Technology: Additional Steps Needed to Ensure Test and Evaluation Requirements Are Met.* GAO–11–596. (Washington, DC: June 15, 2011).

S&T develop mechanisms to document its review of component acquisition documentation. DHS concurred and reported actions underway to address them.

- In July 2011, we reported that TSA experienced challenges in collecting explosives data on the physical and chemical properties of certain explosives needed by vendors to develop EDS detection software.[13] These data are also needed by TSA for testing the machines to determine whether they meet established requirements prior to their procurement and deployment to airports. TSA and S&T have experienced these challenges because of problems associated with safely handling and consistently formulating some explosives. The challenges related to data collection for certain explosives have resulted in problems carrying out the EDS procurement as planned. Specifically, attempting to collect data for certain explosives while simultaneously pursuing the EDS procurement delayed the EDS acquisition schedule. We recommended that TSA develop a plan to ensure that TSA has the explosives data needed for each of the planned phases of the 2010 EDS requirements before starting the procurement process for new EDSs or upgrades included in each applicable phase. DHS stated that TSA modified its strategy for the EDS's competitive procurement in July 2010 in response to the challenges in working with the explosives for data collection by removing the data collection from the procurement process. While TSA's plan to separate the data collection from the procurement process is a positive step, we feel, to fully address our recommendation, a plan is needed to establish a process for ensuring that data are available before starting the procurement process for new EDSs or upgrades for each applicable phase.
- In July 2011, we also reported that TSA revised EDS explosives detection requirements in January 2010 to better address current threats and plans to implement these requirements in a phased approach. TSA had previously revised the EDS requirements in 2005 though it did not begin operating EDS to meet the 2005 requirements until 2009. Further, TSA deployed a number of EDSs that had the software necessary to meet the 2005 requirements, but because the software was not activated, these EDSs were still detecting explosives at levels established before TSA revised the requirements in 2005. TSA officials stated that prior to activating the software in these EDSs, they must conduct testing to compare the false-alarm rates for machines operating at one level of requirements to those operating at another level of requirements. According to TSA officials, the results of this testing would allow them to determine if additional staff are needed at airports to help resolve false alarms once the EDSs are configured to operate at a certain level of requirements. TSA officials told us that they plan to perform this testing as a part of the current EDS acquisition.
- In October 2009, we reported that TSA deployed explosives trace portals, a technology for detecting traces of explosives on passengers at airport checkpoints, in January 2006 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.[14] 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. For example, TSA officials stated that, unlike the explosive trace portal, operational testing for the Advanced Imaging Technology (AIT) was successfully completed late in 2009 before its deployment was fully initiated. We are currently evaluating the testing conducted on AIT as part of an on-going review.

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

According to the National Infrastructure Protection Plan, security strategies should be informed by, among other things, a risk assessment that includes threat, vulnerability, and consequence assessments, information such as cost-benefit analyses to prioritize investments, and performance measures to assess the extent to

[13] GAO–11–740
[14] GAO–10–128.

which a strategy reduces or mitigates the risk of terrorist attacks.[15] 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 TSA has not consistently included these analyses in its acquisition decision making. Specifically:

- 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.[16] 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, but has not yet completed a cost-benefit analysis.
- In March 2010, we reported that TSA had not conducted a cost-benefit analysis to guide the initial AIT deployment strategy.[17] Such an analysis would help inform TSA's judgment about the optimal deployment strategy for the AITs, as well as provide information to inform the best path forward, considering all elements of the screening system, for addressing the vulnerability identified by the attempted December 25, 2009, terrorist attack. We recommended that TSA conduct a cost-benefit analysis. TSA completed a cost-effectiveness analysis in June 2011 and provided it to us in August 2011. We are currently evaluating this analysis as part of our on-going AIT review.

DHS HAS EFFORTS UNDERWAY 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 effect 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.[18]

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, technology development, 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.[19] 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. 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 year 2011 to develop independent cost estimates, a GAO best practice, to ensure the accuracy and credibility of program costs.[20] DHS reports that four cost estimates for level 1 pro-

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[15] DHS, *National Infrastructure Protection Plan* (Washington, DC: June 2006). In 2009, DHS issued an updated plan that replaced the one issued in 2006.
[16] GAO–10–128.
[17] GAO–10–484T.
[18] GAO, *High Risk Series: An Update,* GAO–11–278 (Washington, DC: February, 2011).
[19] GAO–10–588SP.
[20] GAO, *GAO Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Capital Program Costs,* GAO–09–3SP (Washington, DC: Mar. 2, 2009).

grams have been validated to date, but did not explicitly identify whether any of the Life Cycle Cost Estimates were for TSA programs.[21]

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 executing 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 effect 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 Rogers, Ranking Member Jackson Lee, 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. ROGERS. I thank you for those comments. I now recognize myself for my opening questions.

Mr. Lord, you are right on the money when you talked about the failure to adhere to the 2005 standards that TSA has set. When you raised that point in your opening statement, you said that TSA acknowledged that was a problem and was working to correct it. Why haven't they corrected it already, and did they have set a time line? It is crazy to still be using 1998 standards. How did they get by that long without anybody raising this issue?

Mr. LORD. Well, we were somewhat surprised. When we looked at the 2005 standards we found that it took 4 years to start implementing them. So our point was we think it is a positive development. They are constantly updating and refining the standards. But we were concerned about the substantial lag between issuing the standards and integrating them in the machines. I don't want to oversimplify the complexity of the task. These are very complicated of technology. I am not sure we ever got a really clear response. Some of it was related to TSA's need to do some additional testing to see how the false alarm rates were affected. That could conceivably change the number of people you needed in the airport to check bags that are kicked aside.

The good news is they wholeheartedly agree it shouldn't take that long, and they have instituted some changes to improve the process. As they will point out, the 1998 standards at the time were considered world-class standards.

Mr. ROGERS. Well, I guess what I am hoping is when you say they wholeheartedly agree and are going to address it, have they given a time line that they are committed to have implemented these recommendations?

Mr. LORD. I am not sure they have a very specific time line, but I am convinced they are taking action to address it. I will have to get back to your staff if they have committed to a specific time line.

Mr. ROGERS. Do you have a time line to go back to revisit the issue and see if they have followed through?

Mr. LORD. Yes. Under our process, any time we conduct a recommendation, we conduct thorough follow-up after our report is issued to help close the loop. Obviously, we are just as interested as the committee in seeing these important changes in the process are made.

[21] Level 1 programs are those that have estimated life-cycle costs in excess of $1 billion and are reviewed at the Department level.

Mr. ROGERS. Great.

Ms. Duke, you talked about needed alignment changes. Can you talk more fully about that?

Ms. DUKE. The Department operates in the business lines, which include the CF, chief information office, chief financial officer, and procurement and human capital, security and facilities, under a functional integration model, which means that in the operating components, the operating components own those business lines. However, the chiefs of the Department that report to the Under Secretaries for Management have functional authority.

Over time, the Department has refined those authorities to ensure that—to work towards ensuring that the right controls are in place—the oversight, the standardization of policy. That would be typical in a department, where a department would exercise over its operating components. So I think that is important in continuing to strengthen and refine those functional authorities of the business line chiefs to have the Department operate more effectively.

Mr. ROGERS. You recall when I was Chairman of the Management and Oversight Subcommittee, you had raised the issue of inadequate number of procurement office staff. Do you see that having been remedied since your departure?

Ms. DUKE. Yes. The number of procurement staff has gotten better. I think what continues to have to work on is the other pieces of staffing properly the other types of acquisition professionals, like the program managers; test and evaluation is another acquisition career field; logistics, cost estimating. These are all other types of acquisition professionals that DHS continues to try to build a need to get the full answer to running these programs more effectively.

Mr. ROGERS. Mr. Jackson, you talked about the high cost of certification under the current structure. Why is it so expensive and cumbersome right now and how would it be better if we worked in a different direction?

Mr. JACKSON. Right now, it is a fragmented process. You have literally to take machines that you want certified, oftentimes they have to make multiple machines for the certification process, but you have to take them to multiple locations—to Tindall for HME analysis and other unstable explosives. For other more traditional explosives, that is done in New Jersey at the TSL lab. Then you have early testing in a TSA test environment, and in the field you have pre-certification work to do as well.

It is just simply a bureaucratically dispersed and not adequately focused program. It is very, very expensive and becomes a checklist process. You either pass or fail. If you fail, it is oftentimes, if you talk to the people who have been doing this, very unclear to them why exactly they failed and what is necessary to get back in the game. Oftentimes, there are mistakes made by the people submitting the machines. They are sort of obvious and can be corrected. But there is work on both sides that needs to happen.

The model that has been used in Germany, for example, has been very successful in making a more collaborative process while focusing the government on the inherently governmental process of defining the performance requirements that they want from the

output, which really goes to this whole question about what are we trying to get these machines to do.

More and better work can be done there. Greater clarity, greater transparency. Then have a group of people that can maybe perhaps—have two groups that can compete this process and work it more effectively.

Mr. ROGERS. I thank you.

I recognize the Ranking Member for any questions he may have.

Mr. THOMPSON. Thank you very much, Mr. Chairman.

It has often been said hindsight is 20/20. Ms. Duke, Mr. Jackson, you have been here, done that. You have now gone into another part of your professional career. I want to get from you what it is you tried to do to improve this inside the Department and why we didn't get it done. Do you understand? So that going forward we can revisit it from a committee perspective.

Ms. DUKE. Yes, Mr. Thompson. What I tried to do in my positions as Chief Procurement Officer and Under Secretary of Management was to build the acquisition system. I think that we made good starts. I think the reason we didn't finish during my tenure was because there was so much to do. We were in the right direction. I think the work of Under Secretary Borras is taking the Department further in that direction, but just not the time to do it.

For instance, the test and evaluation function that you mentioned in your opening statement didn't exist. So during the tenure that I had at the Department, we set up the test and evaluation function. Now, the current leadership is working to try to refine that to make sure it handles not only developmental testing, which is the part of testing that doesn't meet the specification, but also operational testing, which gets to the point of: Does it perform for the intended use in the operational environment?

So I think that we set the building blocks in terms of what needed to happen. The carry-through has to happen to make it fully functional.

I think another point is that when you talk about effectiveness, it is the balance of cost, schedule, and performance. I believe that in the aftermath of 9/11, there was such an emphasis on schedule—fast, fast, fast—that in the balance of cost, schedule, and performance, there sometimes was an imbalance. And schedule, getting things out quickly, ruled. I think that there is a necessity for continued homeland security excellence to balance being nimble and quick and being postured in a nimble way to be able to react to changes in the terror threat, but also have the stability where you are balancing schedule with cost and performance.

Mr. THOMPSON. Mr. Jackson.

Mr. JACKSON. Congressman, I think that Elaine is correct in everything that she said, and I would just underscore a couple of points. The sense of urgency at the outset of the Department's formation was substantial and animated by an acute awareness that another attack could be upon us each day. So to some degree, it was a rush job to build DHS and then to fill it out in a more professional and effective and efficient fashion. That is not an excuse for mistakes that we have made in that period, but it does explain that the tradeoffs in the sense of trying to build a new organization

from scratch and to deliver a capable set of assets into the field was a very complex set of tradeoffs.

I think what I am trying to suggest this morning is that if you try going forward and focus on things that can have transformational change at the points of failure or the points of opportunity that lay on the field, then that gives you a constructive and positive way to look about going ahead. It is important to understand the failures of the past, as I think your opening remarks absolutely make clear.

Mr. THOMPSON. Thank you. As you know, we have voted in the House on a budget. A lot of those items that you have indicated, we will have to do within S&T. Those funds have been cut.

Now you referenced Under Secretary Borras. He basically has offered testimony to us that if he has to lay off 70 percent of the management directorate staff, that creates a problem.

Ms. Duke, you referenced the fact that under your tenure we as a Congress plussed-up your ability to hire more people. Do you see the reduction in the budget for the Department as creating a potential problem/vulnerability for S&T?

Ms. DUKE. I believe that if Congress chooses to fund a program, that it must fund the people to manage the program. So if the decision is to fund major acquisition programs such as Secure Border or any type of program or TSA technology, that it must fund the appropriate people to manage that program. It goes back to my written statement point of when the money is appropriated to an agency or department, it has the fiduciary responsibility to manage that money. So I do think that we have to continue to fund the Federal employees to manage those programs—the acquisition workforce—yes.

Mr. THOMPSON. So if we create new programs, new pilots, or whatever, and not put the resources to operate them, then we put those pilots or demonstrations at risk?

Ms. DUKE. Well, one shouldn't be surprised if they don't do as well as one had hoped if we don't fund the people to actually manage the programs, yes.

Mr. THOMPSON. Thank you.

I yield back.

Mr. ROGERS. I thank the gentleman.

Ms. Duke, in looking at the TSA and the industry, how can we get them to partner better? What, in simple lay terms, would be the thing that you would suggest first and foremost?

Ms. DUKE. I think starting communications early is first and foremost. Mr. Lord mentioned changing the standards. TSA could and should be communicating with industry early on.

Mr. ROGERS. By "early on," what do you mean? Give me some time lines.

Ms. DUKE. Before setting the standards. New standards, new specifications should not be a surprise to industry. So as it is setting its standards, I recommend that TSA be dialoguing with industry and see what is state-of-the-art? What is possible? What is the cost/benefit tradeoff between different standards that will meet the terrorist threat?

Mr. ROGERS. You were with the Navy. Does the DOD do what you are talking about in their procurement process?

Ms. DUKE. I think every Federal agency can do it more effectively. There is, I will call it a systemic fear that if the Federal Government talks with industry effectively, that it increases the chance of protest. So there is kind of a prejudice to cut off dialogue really just at the point where it would be most beneficial to the program. So I think that what DHS, DOD needs to do is manage that risk and make sure that the communications are fair, meaning they don't just favor a company. So do it maybe in open forums. I believe that doing them orally sometimes helps.

When you get back into the written questions and answers, it kind of looks legalistic. So I think there is more opportunity for oral forums. I think a lot could be done and still not increase the risk of protest.

Mr. ROGERS. But what you are talking about, I take it, is more than just having industry days?

Ms. DUKE. Yes. I think industry days are very useful, but they are too late. They need to stay, but then there needs to be predecessors to industry day.

Mr. ROGERS. Mr. Jackson, you talked in your opening statement about an idea for lease processes. How would that save the Department money?

Mr. JACKSON. Well, first of all, the proposals that have been laid on the table would make these expensive inline baggage system investments and other investments in the technology happen much faster. So you save the time, cost of money, and getting them into the field more quickly. In addition, frankly, by cutting through some of the bureaucratic layers of TSA oversight in a traditional grant-based approach to this, you cut out some of the cost to TSA of the overhead to paying consultants to stand around and watch people to make sure they are doing it right.

You still have, I think, an urgent necessity to have high standards of performance and very clear objectives about what the performance standards are. For example, in what a machine must do and what it must not do; up time, down time. All these types of indicators are crucial to having clarity and success in the mission. But, frankly, there is just a much more efficient way to put capital to work there.

Also, if you are constrained with resources, as we are today, in trying to get done a substantial backlog of work, you have to figure out how to find the cash to do that. You can leverage an awful lot of money and get that work done up-front without having to obligate the entirety of a project's cost and hold it in escrow at TSA while the work is done.

So I think with an approach that is very common-sense and uses private sector capabilities that are structured through a government-to-government contract—the airport authority with TSA—that should be something that we figure out how to work. It is not that hard. It is a very transformational way, however, to intrude a lot more efficiency and effectiveness, and especially over the next couple of years where I think the recapitalization problem is going to leach out the funds that would otherwise be used for some of this backlog of inline systems, that it is an especially timely thing to do, and the cost of capital is at an all-time low, so it is an effective way to do this.

Mr. ROGERS. Is that process being used by any other governmental entity that you are aware of?

Mr. JACKSON. Variations of it are. For example, at LAX, using a basic grant agreement, Delta had worked with a private sector vendor to essentially build and maintain an in-line system for the terminal that Delta operates out of. Southwest Airlines has done a similar thing at multiple different airports.

So there is experience with this. At Denver, for example, after 9/11, the airport was very impatient, rightfully so, to get a big EDS machine deployment working. So they worked with the manufacturer to do a financing project for that, for which TSA came behind and did reimbursements.

So there is plenty of experience in the private sector of how to do these sort of things. There is no one group or way to sign on to make it work. There just needs to be some flexibility, in my view, to have a very fundamental thing that allows the airport authority to structure and take the risk for an investment that supports themselves, the airlines, and TSA, and then allow TSA simply to buy that as a service from that airport authority. That is a dramatic transformation and energizing way to give TSA the tools they need to do it without having to come to Congress and beg for so many billions of dollars.

Mr. ROGERS. Great. Thank you.

The Chairman now recognizes Mr. Davis from Illinois for any questions he may have.

Mr. DAVIS. Thank you very much, Mr. Chairman.

Mr. Jackson, I notice in your testimony that you suggested a prize for technology. One of the complaints that I have heard from vendors, both large and small, is what they consider to be a lack of direction and planning from TSA. There is no indication of multi-year planning or strategy in its procurement process. How would offering a prize really help, and wouldn't it continue to hold TSA to being reactionary or being a reactor as opposed the initiator?

Mr. JACKSON. An excellent question. Let me see if I can try to just explain in short compass.

This is not something that would cover every need or objective at TSA, but for some major transformational investments that need to happen, where you take not incremental change but substantial change, what you are trying to do is go from the existing model, which is basically to seed a variety of different firms and hope they come out with a successful machine or a successful technology. Instead, to reverse that a little bit and say: Here is a very important outcome.

I give one example, which is, I believe, that it is possible, I know that it is possible, with the right focus, to get an AT machine to be able to detect liquid explosives in a bag. TSA has gone through several years of conversations with the vendor community about that. I believe if you made a very simple objective of achieving that goal and then put some money behind it, it would induce people to invest the time and energy and focus to get there, whereas right now it is a very uncertain outcome for the vendor community; if you invest in this thing one day and another thing another day,

whether you are going to be on point for what TSA really most needs.

So that is just a way of trying to get the Government to focus on the two or three things that are most transformational for the Government, and then the private sector to chase it with a sense of urgency and dispatch and innovation.

Mr. DAVIS. So are you saying that the vendors are more reluctant to explore new or different approaches if they don't have much indication of what the outcome might be in terms of TSA deciding that what they have come up with is something that it really wants to use?

Mr. JACKSON. That is true. It relates to the other point I had made in the testimony about the complexity and expense and time delays associated with the certification process. So if you could make that more transparent, more efficient, less costly, then you can actually help bring these two ideas together to allow TSA to focus their highest priorities in a way that is very clear and to give the vendor community a system that they can use to get it certified.

Mr. DAVIS. Thank you. That leads me to my next question, actually. Mr. Lord, what would you say is the most effective means for DHS to assess cost and benefits of new technologies?

Mr. LORD. In terms of cost, first of all, they already produce lifecycle cost estimates at the component level. What has been lacking in the past, as Ms. Duke alluded to, is the need to validate these cost estimates. Have an independent office outside of the component validate independently whether these estimates are realistic. That is in terms of cost.

In terms of performance, again, it is an independent oversight issue. I think it is always good to have a second set of eyes review any estimates or summary of performance that are delivered to senior management.

So, again, it is just an independent oversight function that has recently been stood up. We think it is a good thing. It has taken years to erect it. So we would obviously have some concerns if that was changed significantly.

Mr. DAVIS. Thank you very much. My time is about to expire, so I will just end there.

Mr. ROGERS. I thank the gentleman.

Mr. Jackson, in your testimony, you discussed the considerable backlog of inline checked baggage system replacement projects. Even if Congress writes annual checks to TSA to replace these technologies as they age, would we find ourselves during this perpetually as the technologies need to be replaced? In your opinion, is this a sustainable way of doing business? Ms. Duke, I would like your comments on this as well.

Mr. JACKSON. I don't think it is sustainable under the current procurement model because we need to address several problems in this—how to get more capital into the field faster and more efficiently. That is a big problem. Alternative finance helped address that.

There is a question that I think has come up with several of the Members' questions here this morning about the change and the pace of change for managing the software that drives detection in

these big explosive detection systems both at the checkpoint and downstairs with checked baggage. The issue is that our opponents in the field are constantly innovating them in the way they package and the types the recipes or formulas they use for explosives. It is not just a simple inventory of death tools that are out there and once you figure out how to use those, you have got everything covered. It is a constantly iterative cat-and-mouse game between the bad guys and the Government to figure out how best to use your devices.

The Government puts the standard on the table when they buy these things in good faith. As Mr. Lord says, the procurements we did after 9/11, we took the state-of-the-art that we could deliver and that the manufacturers could come to the table with. But that state-of-the-art changes over time and it produces a series of different software operating platforms that have different capabilities different from one manufacturer to the next and over time they get progressively more complex and more efficient and more effective. But the threat changes as well.

So what you are in is a game of exploring how to do this on a continuous basis. That is why the suggestion that I make about making the architecture of the software open and transparent is so vital because what that would do is give TSA the capability to take charge of its destiny in making rapid and iterative changes in the software algorithms necessary to make these machines work against the current threat level. That way you get a better value for the long term for the very substantial investment that you have paid for with the machines.

The medical industry has made phenomenal progress in this way. If you just think about what an iPhone did with apps, it is the same thing, really. When you make an open architecture for a device that is widely used and iteratively changes, you now empower a whole community of smart people to come in and help you work on those type of tools.

What you can do if you had that and you gave a little prize money for success on specific things, these four things all link together to say you have to stand back from where we have been and really evaluate how to go forward and give TSA the tools they need to succeed. Some of these things that I have suggested TSA may be less favorable about, and others much more favorable. Some in the industry may not like them as much and others they may like very much. I am saying that the responsibility of an independent analyst and the Congress is to step back and say: How can we put together the right tools to make it happen?

Mr. ROGERS. Ms. Duke.

Ms. DUKE. Mr. Chairman, when TSA stood up, its focus was on Federalizing the airports in a short amount of time. I think from the perspective of getting that, it was a huge success. Two challenges that it resulted in that is something that we have to deal with now are the reliance on technology, virtually solely, and second are what I call chokepoints in both passenger and baggage screening in the process.

So I think that as TSA moves forward, looking at the layered risk-based approach to screening technology is an improvement that could be made. We still have to rely on technology. But how

do we address the risk-based piece of it, and the layer, including like the behavioral technology.

So I think that TSA, working with CBP, because that is something they have done in the past, is a step in the right direction. So you have your technology as a base, but then you also have the layered approach that deals with these two challenges. One is the overreliance on technology and the cost of that, and the second are these movement of goods and people chokepoints.

Mr. ROGERS. Mr. Lord, your thoughts.

Mr. LORD. I agree with Ms. Duke, it is very important not to lose sight of the impact on commerce. You are obviously trying to balance commercial considerations—moving people through airports with security needs. I always like to add another consideration, and that is privacy. That has recently been discussed extensively in Congress and in the press. So within that triangle, you are trying to figure out where to put your pin—privacy; security; and throughput, or commerce. So I think that is a constant struggle.

In terms of the additional financing flexibility Mr. Jackson has alluded to, I think that is a very interesting concept. I haven't seen any proposals in writing, but I know the TSA administrator, he has already been on record in suggesting there could be some additional flexibility needed in financing so many improvements being made at airports.

In terms of open software issue, I believe I would have to think about that. There is obviously some National security considerations involved here. We don't want our adversaries to know exactly what our requirements are, what our machines are looking for. Is there a way to make the process more transparent in terms of testing? Probably if TSA was here to probably mention this new testing facility they are coming up with, hopefully that will address some of Mr. Jackson's concerns stated today.

Mr. ROGERS. Excellent. The Chairman now recognizes the Ranking Member Ms. Jackson Lee from Texas.

Ms. JACKSON LEE. Mr. Chairman, let me thank you for your indulgence. I appreciate the opportunity to briefly give my opening remarks and how the Chairman must proceed I would like to raise a few questions if I might.

[The statement of Ranking Member Jackson Lee follows:]

PREPARED STATEMENT OF RANKING MEMBER SHEILA JACKSON LEE

SEPTEMBER 22, 2011

TSA and the Science and Technology Directorate at DHS are tasked with the critical mission of delivering technologies that can improve transportation security. I cannot overstate the importance of this mission.

Given the risks to our aviation and mass transit sectors, it is imperative that we take a close look at how DHS integrates an effective security technology approach into our transportation security programs.

Last Congress, this subcommittee took the first step in this evaluation.

I held a hearing exploring the Department's effectiveness in acquiring and deploying passenger screening technologies and procedures.

Coordination between the Science and Technology Directorate and the Transportation Security Administration is essential to ensuring that the best technology is deployed in a systematic way.

We cannot address emerging threats with an ad hoc practice and a lack of process.

To be clear, Mr. Chairman, the Department has come a long way since its establishment but more must be done to ensure an effective research and development program that leads to purchases in the real world.

However, because my colleagues on the other side of the aisle have proposed to slash S&T's budget below the President's fiscal year 2012 request, I have little hope that S&T will be able to fulfill its mission.

We ask the Department to improve efficiency, delivery, and coordination efforts but we want them to do this with inadequate funding.

Doing more with less is a good campaign slogan, but it does not explain how we get the necessary research and development done.

It doesn't explain how we keep this Nation safe from emerging threats.

Mr. Chairman, I know from my discussions with you, that we share the same commitment to securing our Nation's transportation systems.

Ms. JACKSON LEE. Let me thank the witness for their presence here today and I acknowledge some other friends and individuals we discussed in the past I am delighted with the Chairman and our effort to be part of the securing of the homeland and recognizing the importance of job opportunities through new technology. I think this is a very instructive hearing.

Mr. Chairman, I would encourage that we expand these hearings and hear more about the emerging technology.

In particular, TSA and the science and technology directorate at DHS are tasked with the critical mission of delivering technologies that can improve transportation security. I cannot overstate the importance of this mission, given the risks to our aviation and mass transit sectors. It is imperative that we take a close look at how DHS integrates an effective security technology approach in our transportation security programs.

If I might anecdotally say, had any of us heard of a shoe bomb in 1995? But our terrorist community, if I might use that with some tongue-in-cheek, are at the cutting edge of technology. Had anyone heard on the Christmas day bomber of the hiding or the placing of bomb materials in a strategic location of which it was found? They are looking for new ways to do us harm.

Last Congress, this subcommittee took the first step in this evaluation. I held a hearing exploring the Department's effectiveness and acquiring and deploying passenger screening technologies and procedures. Coordination between the science and technology directorate and the Transportation Security Administration is essential to ensure that the best technology is deployed in a systemic way.

We cannot address emerging threats with an ad hoc practice and a lack of progress or a lack of process. To be clear, Mr. Chairman, the Department has come a long way since its establishment, but more must be done to ensure an effective research and development program that leads to purchases in the real world. However, because of my colleagues on the other side of the aisle I am concerned about the slash in the S&T's budget below the President's fiscal year 2012 request. I have some concern that S&T will be able to fill its mission. Maybe the Chairman and I can raise this question in a bipartisan manner. I have always said we should not nickel-and-dime our security. We ask the Department to improve efficiency, delivery, and coordination efforts, and I expect that they will do so. But I also think that they cannot function with inadequate funding. Doing more with less is a good campaign slogan, but it does not explain how we get the necessary research and de-

velopment done. It doesn't explain how to keep the Nation safe from emerging threats.

Secretary Napolitano is reaching across the Nation on the slogan and the effort of "see something, say something." We are calling upon Americans to rise to their higher angels and to be part of securing the homeland. We must do our job and our job is to ensure that the resources are there for the right work to be done, to be able to approach and face the threats that are constantly emerging.

Mr. Chairman, I know from my discussions with you that we share the same commitment to secure our Nation's transportation systems, and I look forward to doing so. I might add anecdotally that I think the Chairman and I were speaking of the new technology and canines, the kinds of canines, how they are bred. That is a step that was not in focus or in play, if you will, either before 9/11 or shortly thereafter. So I believe that our technology is the key to the 21st Century and I ask as I proceed with my questions that we continue on that pathway.

Let me proceed with some questions. Ms. Duke, welcome. It is good to see you. I know we went down this pathway again, but it disturbs me that I would like to pose it again and that is around the explosives trace portal known as puffers, costing us $36 million. The reason why I use it is because it will be used by others. I know that my Ranking Member of the full committee also posed this question that it was removed from the airport checkpoints in 6 months. I think I remember being puffed and seeing how it worked. It was an attractive looking and I do not say this with disrespect, but toy. It had those kinds of bells and whistles. I can imagine it might have been that kind of an attractive sight when someone made the determination.

So the question comes again: What is the level of expertise that reviews new technology? What are the bells and whistles that should go off? I would like Mr. Lord to comment, $36 million used against us at some point in time, it might have had some value, but it didn't function in 6 months. Do we have the right kind of expertise that are vetting these particular new projects?

Ms. DUKE. I think there are two aspects at the beginning and end of the process: The first is setting the requirement to meet the operational need most effectively. We talked about that a little earlier. The second——

Ms. JACKSON LEE. Did we do that in this instance or do we have the kind of expertise? I doubt that——

Ms. DUKE. I think the Department and TSA continues to build it, but it is still a work in progress. I think at the other end of cycle is test and evaluation. I mentioned earlier that initially there was probably not enough testing in either area. Then we started to improve the developmental testing which deals with how can—do these machines meet the specifications. Then near the end of my tenure, we started to, more systematically, do more operational testing and that is the full picture. Operational testing just doesn't meet the specification, but does it operate for the intended purpose in the intended environment? I think this is an area that is building and will really help ensure the puffer scenario doesn't happen in the future.

Ms. JACKSON LEE. Just quickly, do you know how many staff are involved in those layers, operational, developmental?

Ms. DUKE. At the Department level there are few people in S&T, standard and test and evaluation division. There should be test and evaluation personnel in each of the major programs but I don't know the numbers.

Ms. JACKSON LEE. Can you get back to us with a number, it would be helpful to me, if you would. Did you hear me?

Ms. DUKE. Yes.

Ms. JACKSON LEE. If you would say what your appointees——

Ms. DUKE. I will work with the Department, since I am retired now, I will work with the Department to get access to that information.

Ms. JACKSON LEE. I appreciate that. Mr. Lord, do you want to comment on how we found ourselves in that manner? Do you have the expertise in house?

Mr. LORD. I think this whole puffer episode underscores the importance of conducting rigorous testing and evaluation. I would just like to amplify. I agree with Ms. Duke's assessment. I would like to clarify, there are two types of test and evaluation. There is qualification test and evaluation, that is where you test against the requirements in a controlled laboratory setting. I think that was done. But I think where the shortfall occurred is operational test and evaluation. That is where you test in a real-world setting. What they found with the puffers is when there is dirt in the air, high humidity, temperature variations, that it did not perform like it did in the carefully controlled laboratory settings. So again, the lesson learned is you need to test it in real-world conditions. That should be part of your testing scenario. They have changed their processes now. That is a requirement for the new technology. So hopefully, these types of incidents will be avoided in the future.

Ms. JACKSON LEE. Do we have the in-house expertise? Do we have scientists at the level——

Mr. LORD. We not only have more procurement experts, acquisition experts, independent cost estimators. There are more people concerned with testing and evaluation. Again, as I stated earlier, you need to have that function outside of the component level, you need to have an independent function and they stood that up. So it is—I mean, they have been strengthening the process over the years. It has taken probably—it has taken a long time, but they do have the enhanced processes and testing capabilities now, which is a good thing.

Ms. JACKSON LEE. Let me quickly ask—thank you very much, Mr. Lord. If I can put on the record that I would like to get the numbers of the staff and the levels of positions that they hold. So Mr. Chairman, I am not sure Mr. Lord will be able to help us, Ms. Duke is retired, and I do appreciate that.

Let me just pose this question: There is not a moment that we are home in our districts that the American people whose tax dollars we are entrusted to who are in business ask us about this complicated process of doing business with the Federal Government. I have encouraged the President to talk more about buy America from the perspective of the Federal Government that every effort is made to buy America. I think if we buy paper clips from a small

business in the United States, we have just built capacity beyond our expectation.

What steps do you recommend for TSA in order to issue and award contracts quickly, at the same time, ensuring competition and the proper use of TSA funds in the technology area? What can we do? Forgive me if someone has asked that.

Ms. DUKE. I think that one of the key steps is communicating with industry early and openly and that goes back to before the requirements are set, not just a day once the requests for proposals was issued, but work with industry early on about what is state-of-the-art, what is the art of the possible and what are the cost and schedule tradeoffs for going to the cutting edge technology, versus commercially available and the stages in between. So I think that is very important. I also think it allows industry to bid more effectively if they know what to anticipate and plan for.

I think setting clear requirements is No. 1. I know I have worked that into every hearing that I have ever testified in, but that is important. Industry has to make a decision whether to propose on a contract. Without a good requirement it really is kind of—it really is taking on undue business risk.

A third part, I think, is educating the businesses, especially the small businesses and how to do business with the Government, programs such as the Small Business Innovative Research Program need to continue so that small businesses have the opportunity to enter the Federal market in a prime contract function, not just as a subcontractor.

Ms. JACKSON LEE. Let's probe that because we have had long discussions. I know when you were in the Government you were out on the road. We are still hearing from small minority and women-owned businesses. How do we get the mind-set to be more energetic on really aggressively looking at small businesses may make their application or they are fishing around to really create the atmosphere they could thrive and secure a contract? Is there some pearl of wisdom or some action you took that you not just offered to us in testimony right now? Some anecdotal story that might give us some understanding how to get small businesses involved.

Ms. DUKE. Well, I think really the key is for the small businesses decoding the process, there are a lot of acronyms and stuff that seem complicated. I think education is the key.

I think the recent change to allow set-asides for women-owned business is a step in the right direction for that. I encourage women-owned businesses to get certified just like there is certification under the 8(a) program, because that allows you to compete against your peers, just other small women-owned businesses as other small 8(a)s, that is huge, because it is more of a level playing field than you competing against a large business. Both the Department and Small Business Administration has to really continue that education process.

The other point if it is a pearl of wisdom, I would say is think small; it is always hard to get that first contract, just like it is hard to get that first job when you are out of college. So when I am coaching small businesses, I say really look for that opportunity where you can garner your reputation and get that past performance in Federal Government. I think that is important.

Ms. JACKSON LEE. Let me just—Mr. Chairman, I am concluding in just a moment. Let me make this point on the record, Mr. Chairman, which I hope we can find a way, maybe the committee could join in sort of an on-the-Hill summit about this small business issue because it impacts all of our constituents. I want the Federal Government to put small contracts forward. It is difficult to get procurement officer to think of the value of the those small contracts, maybe you can have greater encouragement, if we could, to be able to do that.

Mr. Jackson, from your business perspective, a comment on doing business with the Federal Government, particularly on the technology lines.

Mr. JACKSON. Well, I think that TSA has made huge progress in trying to figure out structures and mechanisms to work with businesses large and small. So they are in the process of growing, they have made substantial changes and progress and there is more to do. So there is always more to do. So I think that TSA could do more in reaching out to businesses in a systemic way.

I agree with what Elaine has said for the process. I would also add it is equally important once a business has gotten an award for a service or technology, it is particularly important to give sustained feedback and input to the company about how they are performing. That is frequently an area that is easy to ignore or forget. So if you are producing a piece of technology and it gets out into the field and it is not doing certain things that the users would like or it is doing them particularly well, those are things that need constant feedback. It has to start with the beginning of an idea of a need and continue all the way through the operational life.

Ms. JACKSON LEE. If I might interrupt you, do you know the functional coordination officers and capabilities requirement council that DHS is proposing? Does that ring a bell?

Mr. JACKSON. I do not, ma'am.

Ms. DUKE. Ms. Duke knows about it. Why does the Federal Government have—Chairman, do you know about the functional coordination offices and capabilities and requirement council?

Mr. ROGERS. First time I have heard it.

Ms. JACKSON LEE. Ms. Duke, will you tell us that be worth—Mr. Jackson, I didn't mean to interrupt you. I just thought you may be aware of it.

Ms. DUKE. Mr. Lord may want to comment, but that is part of DHS's answer to the GAO integrated high-risk plan. What that seeks to do is define commonality in capabilities and mission requirements across DHS and eventually buy more effectively. So if TSA, CVP Coast Guard have a similar mission requirement, how can you rationalize the requirements and then buy them more effectively?

Ms. JACKSON LEE. Is it proposed, or is it in place yet?

Ms. DUKE. It is part of the report that went to GAO and they are in the process of putting it together. I believe Mr. Lord could verify that.

Mr. LORD. That is correct.

Ms. JACKSON LEE. Thank you. I will finish with this question Ms. Duke. Thank you, Mr. Lord, and I do not take issue with the language as long as I understand it, but it is pretty long title here.

I noted that it is to become more efficient with the buying process when there is overlap.

Let me just ask this question, Ms. Duke. In your testimony, you emphasize a need for an appropriate acquisition workforce in your review or your knowledge of the proposed House budget, which I will just say cuts quite a bit. Does the proposed House budget impact DHS's effort to ensure accountability and a acquisition workforce adequate to stimulate economic growth and innovative solutions in Homeland Security technologies?

Ms. DUKE. I have not looked at the current proposed budget, but I can say this: One is that the acquisition workforce has to stay in proportion to the program dollars. So if the cut in the acquisition workforce is more than the program dollars, that is going to be to the detriment of the spending of the money. It will make it harder for the acquisition workforce to get the requirement out there and get under contract to allow job growth and industry. I learned in industry, that oftentimes they have a percentage so that as they look at program or direct dollars, they anticipate a percentage increase and the need for people like acquisition workforce, human resources, and I think that is important in ensuring that the taxpayers dollars are spent.

Ms. JACKSON LEE. Thank you very much for your indulgence, Mr. Chairman. To the witnesses, let me thank you very much for what I think is a major component to securing the homeland, but at the same time, the Department of Homeland Security gives a very, very important opportunity for the genius of America, the new inventors, the new technology that can both secure us, but generate the next level of inventiveness and jobs. With that, Mr. Chairman, I thank you for this hearing and I yield back.

Mr. ROGERS. I thank the gentlelady.

Mr. Lord, in your opinion, is it fair to say that in the procurement process TSA over the last 10 years, we have largely been reacting to the last terrorist attempt rather than looking forward to new technologies and new threats?

Mr. LORD. That is—hmm. I would have to say in terms of their requirement-setting process, they are trying to anticipate new threats. That is why in January of this year they broadened and deepened, I can't give any specifics, it is sensitive information, but they have made an attempt to keep abreast of latest developments. You know, it is Government bureaucracy, sometimes it probably takes a little longer than you would anticipate, but they are making an attempt. In terms——

Mr. ROGERS. Do they have formal practice, exercises is what I am getting at. When I played football a long, long time ago, we would have what we call skull sessions, that was all about brainstorming. I am wondering does TSA have formal meetings or functions where they just sit around and think in cooperation with the private sector, what are our threats? How can we deal with them? Are you aware of anything like that, any exercises?

Mr. LORD. They set up this process with S&T, it is called integrated product team IPT capstone process where they try to harmonize and discuss what are the threats and requirements, what are the detection issues we should be aware of. I know they made at least some effort. Also, they do reach out, Ms. Duke mentioned

the industry days, they conduct classified briefings. They have discussions with industry: Is it enough? I don't know how you would measure that, but they do have mechanisms in place. What we found in our prior work is vendor still considered an issue, it is difficult to evaluate, because the vendors, you are not sure what the basis of the complaint is, but they have been very vocal with us. I think it is something TSA needs to continue to work on. Obviously they are trying, but could further efforts be made? Absolutely.

Mr. ROGERS. Mr. Jackson, your thoughts?

Mr. JACKSON. I think TSA absolutely does look in the rear-view mirror, and they must do that, because once you have a known threat, you have no excuse not to try to cover that threat in an effective way. My experience in the Government showed that we spent however a substantial amount of time, a really focused effort to try to anticipate changes in this. So the TSA administrator begins his or her day with an intelligence briefing from the intelligence community that sucks up all this sort of information about current plots, techniques, tools, devices, modes of attack, and it has home at DHS headquarters, intelligence shop, it has an intelligence shop home at TSA. This is how you begin your day if you were in a job like my old one, I would start 7:00 a.m. with those type of briefings.

Then each of the operating components, most all the operating components have real field work, CDP, Coast Guard, TSA, Secret Service have that focus. Then there is a systemic search for what you can do to make a cost-effective investment for a dollar to try to cover the known threats and the unknown threats. For example, when Kip Hawley became TSA administrator, we had a very sustained and focused conversation around how can I spend a certain amount of money and achieve the maximum extra benefit for detection. I had some of these conversations with you at the time. We thought getting more dogs and behavior recognition into the field as fast as we could in a disciplined way, were the two most efficient ways to take on a bunch of unknown problems, but which fell into that categories that we knew we could work through with those tools. So my experience is you have to do both, TSA does both. It is a hard job to try to crystal ball the means of attack in the future. It can always be improved, that process can always be improved, I assume, but they work at it.

Mr. ROGERS. Ms. Duke, your thoughts.

Ms. DUKE. One of the recommendations I would have is that one difference between Department of Defense and Department of Homeland Security is the budgeting and programming process. Even though both have an annual budget. Within Homeland Security it tends really, even though you submit a 5-year budget, it is really nearly 100 percent annual. Where in Defense even though most of their appropriations are annual also there is really a 5-year plan. They really look at the 5-year budget. I think that TSA has to look back, as Mr. Jackson said, and also, has to look forward.

But really, looking at the 5-year budget as a plan, subject to the annual adjustments that are necessary, but really looking at that comprehensively, because the years do feed on each other, I think would help TSA look more perspectively and plan better. I think

it would also help industry because then they can anticipate if there is a reasonable assurance that they can predict the out years, I think it would help them use some of their—as you know every industry partner major has the IRAD funds, internal research and development. It would help them use that more effectively if they knew what they could reasonably anticipate in the budget out years.

Mr. ROGERS. Excellent. Mr. Lord, you had something you wanted to say?

Mr. LORD. Yes, I wanted to add one thing to my prior remarks. On the Department-wide basis, the Department has an office of risk management and analysis, they go through the scenario testing, what, looking at different scenarios, how the terrorists could hit us next. It is really interesting, they literally model hundreds of scenarios. They try to get at the unknown unknowns, as former Secretary of Defense Rumsfeld once labeled it, the so-called Black Swan, what should we be worried about that we can't even vision. Sort of futuristic, I think that office does good work and that is an important part of their program.

Mr. ROGERS. I am glad you offered that. The Chairman now will recognize Mr. Richmond, if he has any questions.

Mr. RICHMOND. I will just ask one and it is to Mr. Lord. I know GAO has done extensive work on TSA and looking at their workforce. I guess my specific question would be looking at the high turnover and attrition there, and its impacts on fewer training opportunities, especially based on the fact the checkpoints are understaffed and workers are not allowed to take time off for training. What type of impact does that have on the training on the deployment of checkpoint technology?

Mr. LORD. Um, all due respect, sir, we never looked at that question specifically. What we did look at was turnover at the higher level, the SES level. We found that turnover typically goes up after a new administrator comes on board and levels out. Over time, it had gone down. It wasn't out of line with the rest of the Department, so I can't answer that specifically as relates to the transportation security officers, but the only work we have done was at a much higher level on that.

Mr. RICHMOND. Thank you. I yield back.

Mr. ROGERS. I thank the gentlemen. I thank the witnesses. This has been very helpful. This hearing is the first in a series of three. We wanted to get folks who could to have kind of a rearview mirror perspective and get their thought from the 20/20, "you are out of the Government looking back in" perspective. Our next panel hearing will be with private sector folks who have had struggles in working with the Department, what they think we can do to improve the procurement process. Then we will have a third and final hearing where we have DHS folks come in who are doing it now. They will have the benefit of your testimony and comments here today as well as the private sector folks, and hopefully well get something productive out of it. I do appreciate all of you. I want to remind the witnesses that there may be some additional questions from Members who couldn't be here. So we will hold it open for 10 days, if you could respond to those, I would appreciate it.

Again this is very helpful. Thank you for being here, this hearing is adjourned.

[Whereupon, at 11:25 a.m., the subcommittee was adjourned.]

TSA REFORM: EXPLORING INNOVATIONS IN TECHNOLOGY PROCUREMENT TO STIMULATE JOB GROWTH, PART II

Thursday, October 13, 2011

U.S. HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TRANSPORTATION SECURITY,
COMMITTEE ON HOMELAND SECURITY,
Washington, DC.

The subcommittee met, pursuant to call, at 2:15 p.m., in Room 311, Cannon House Office Building, Hon. Mike Rogers [Chairman of the subcommittee] presiding.

Present: Representatives Rogers, Jackson Lee, and Richmond.

Mr. ROGERS. The Homeland Security Subcommittee on Transportation will come to order. The subcommittee is meeting today to continue to examine innovative solutions to technology procurement at TSA that could generate cost savings for the Federal Government and stimulate job growth within the private sector.

I want to thank our witnesses for being here. I know it is a consuming effort, but I appreciate them making the time to participate in what I believe is going to be a very timely hearing. We look forward to your thoughts on how TSA can continue to improve its working relationship with the private sector.

Our job on this subcommittee is to ensure that TSA has the resources and capabilities needed to secure commerce and the traveling public. Through that oversight, we have a great opportunity to examine the ways to solve some of our Nation's other challenges, the most pressing of which right now is high unemployment. This subcommittee held the first installment of this series of hearings just a few weeks ago. In that hearing we heard from former DHS officials and the GAO on ways in which TSA can do a better job communicating with the private sector and ways TSA and DHS might reform their procurement processes.

Some of the ideas we heard included things like providing the private sector with a much better roadmap so they can work to meet TSA's needs in a less reactionary sort of way than what we are seeing now.

It is clear that we need to look at ways to streamline and reform acquisitions mechanisms within TSA and the Department more broadly. Chairman King's authorization bill, of which I am an original cosponsor, gets at some of these reforms in matters like strategic sourcing and enhanced requirement settings.

I can't overemphasize the need for well-thought-out requirements. Both the Science and Technology Directorate and the oper-

ational components of TSA must be part of the process. The Capabilities and Requirements Council that DHS is standing up once again, after having disbanded it, should go a long way toward that end.

We have heard recommendations of a third-party certification for alternative financing for strategic sourcing and for revising the clearance process. I am pleased to see these ideas in the dialogue that these hearings generated around the issue. We must examine all options for finding new opportunities to engage industry.

What I would like to hear from all of you are viable options for changing how things are done at TSA that will build innovative capacity in your world. You know better than anybody what you need to promote progress in your challenging but critical fields and create job opportunities.

I want to do all I can to foster that innovation of which I know the private sector is incredibly capable, so I look forward to hearing your thoughts on finding cost efficiencies and creating jobs through improved technology procurement at TSA. I encourage you all to return next month when we invite the Department to testify on that same issue.

With that, I yield to my Ranking Member, my good friend from Texas, Ms. Jackson Lee, for any opening statement she may have.

Ms. JACKSON LEE. I think this series of hearings are both important and relevant in light of the fact of our full understanding that security is holistic, and it requires a seamless interaction between the S&T of the Department of Homeland Security and the importance of the private sector.

I have interest of the private sector's collaboration. I don't have interest in the private sector's dominance. But I do think it is important that S&T becomes more focused, that it is not a hobby shop, that it is intertwined with the framework of our present conditions. I always say this. I think the Chairman has heard me say this, that terrorism is becoming franchised. We use the term "lone wolf." I prefer using "individual actor" and we don't know who that actor may be.

So it is not a laughing matter or a matter that draws humor, but it requires a sense of balance and a sense of understanding that all the principals are important in the effort of securing the homeland.

So as I indicated I know from our discussions that the Chairman and myself share the same commitment to securing our Nation's transportation system. Understand that today's hearing is the second hearing in this series, and I look forward to receiving testimony from today's witnesses and hope that the third hearing, which will contain Government witnesses, will provide insight on the practices of this administration.

Today we will hear from members of the business community. I want to first welcome Mr. Guy Ben-Ari, deputy director of the Defense-Industrial Initiatives Group at the Center for Strategic and International Studies. It is an important think tank, and I thank you for being here today.

At the September hearing, we heard from former Homeland Security officials. They testified about the need for greater cooperation between business and Government in developing contract re-

quirements for major research projects. The 9/11 Commission was a very, very thorough review, I believe, in the immediacy of the tragedy. But they produced a readable document. All of these elements are part of preparedness, part of putting on our armor, and it is imperative that we continue going to the next generation of technology that gets us more than one step ahead of the terrorists but many steps ahead of the terrorists.

While this is an interesting thought, as you know, the Federal Acquisition Regulations have strict rules about the depth and breadth of permissible discussions between Government and industry prior to the announcement of a contracting opportunity.

I think the last hearing also made it clear that this administration has given some thought and taken some action on how TSA and S&T can improve their collaboration. We can put in a framework where the security issues are answered and the dialogue can continue.

We in Congress need to support and encourage efforts to assure that Government is more efficient and generally meets the needs of its customers and the American taxpayer. Unfortunately, the current budgetary atmosphere makes a strong and robust research and development agenda unlikely, though I would like to push the envelope to say that we should not nickel-and-dime the Nation's security.

TSA and the Science and Technology Director at DHS are tasked with the critical mission of developing, evaluating, and delivering technologies to improve transportation security. Their job is to increase public safety. Given the risk to our aviation and mass transit sectors, DHS must be able to integrate effective security technology into our transportation security programs. However, new solutions, old problems, seldom come without cost.

Mr. Chairman, at this point we must ask: What costs are we willing to pay? We should not be afraid to spend dollars if we save lives.

Let me put in an additional note. Some of the greatest research comes from start-ups and small businesses. I don't want to see the intricate and difficult procurement process that is tied to S&T and the Department of Homeland Security keep away those genius ideas that may be the next level of securing the homeland. I hope the witnesses will comment on the need for that kind of view in order to keep with the next generation of technology.

I will just make one point. Every time there was a terrorist act post-9/11, from the anthrax to the shoe bomber to the underwear bomber, unfortunately these were low-tech, but everybody in the United States I would imagine had never heard of it. Low-tech, never heard of it. What is next? We have got to be ahead of that kind of action. So we should not be afraid to spend dollars however because my colleagues on the other side of the aisle have from the leadership decided to slash the Department's budget below fiscal year 2012. I am not hopeful of moving forward.

So I am hoping to convince a few of my colleagues that research and development under the S&T is extremely important. I hope this testimony will help the Chairman work with me on that idea and that premise, and that we can ensure that we do not stop the

collaboration between the private sector, the effectively secured collaboration between the private sector.

With that, Mr. Chairman, might I just offer, as I indicated to you that I have a duplicate or an overlapping hearing of which I am offering amendments to legislation. If the witnesses perceive that I am departing, I am hoping to return to this very important hearing, and I have asked the Chairman for his indulgence, and he has been kind enough to indulge me.

Thank you very much, Mr. Chairman, I yield back.

Mr. ROGERS. I thank the gentlelady.

I am tickled to have such a fine panel here. I appreciate all of you.

We have Mark Pearl who has served as the president and CEO of Security and Defense Business Council since March 2008. Prior to joining the Council, Mr. Pearl was principal and chairman of IT Policy Solutions, which he founded to counsel private sector organizations in meeting their public policy challenges. He concurrently served as executive director of the Consumer Electronics Retailers Association. Mr. Pearl had previously been a partner in the international law firm of Shaw Pittman and led their e-commerce policy practice; served as general counsel and senior vice president to the ITAA, now Take America, and was chief of staff and legislative counsel to U.S. Representative Dan Glickman when the former chairman chaired the House Intelligence Committee.

We also have Scott Boylan, who is vice president and general counsel of Morpho Trust USA, where he overseas legal and Governmental relations functions. Mr. Boylan joined Morpho in April 2005 where he served as vice president of Government Relations and general counsel. Prior to joining Morpho Detection, Mr. Boylan was senior advisor to the Secretary of Homeland Security and part of the team that established DHS. Immediately prior to his time at DHS, Mr. Boylan served at the Treasury Department and the Department of Justice in international law enforcement roles. We are pleased to have Mr. Boylan here and appreciate his testimony before the committee on numerous occasions.

We also have Guy Ben-Ari, deputy director and fellow of the Defense Industrial Initiatives Group at the Center for Strategic and International Studies, where he studies the links among innovation industry, military capabilities, and defense policy. Prior to joining the CSIS, Mr. Ben-Ari was research associate at George Washington University, Center for International Science and Technology Policy, where he worked on National research and development policies and network-centric capabilities.

From 2000 to 2002 he managed collaborative research and development programs for Gilat Satellite Networks Limited, an Israeli high-tech company in the field of satellite and communications, and from 1995 to 2000 he was technology analyst for the Israeli Government. He also consulted for European Commission and the World Bank in innovation policy and project evaluation.

We are thrilled to have all of you here and look forward to your opening statements before we go into questions.

Mr. Pearl, we will start with you.

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

Mr. PEARL. Mr. Chairman, thank you for giving the Homeland Security and Defense Business Council an opportunity to testify before you today to discuss the important issues involving technology procurement at the TSA, particularly related to innovation and job growth in the private sector. The Council, as you well know, serves as the collective voice of the Nation's leading homeland security solution providers whose major goal is to facilitate transparent, substantive dialogue between industry and Government on critical homeland security issues.

Our written testimony focuses on providing the subcommittee with industry's perspective on how TSA in particular, and the Department of Homeland Security as a whole, can work more effectively with the private sector to improve technology acquisition and procurement process, as well as stimulate job growth.

While my written testimony goes into obviously much more issues and more detail, I would like to use my time to highlight a few issues that we raise.

Everyone understands that the full acquisition life-cycle process is very complex and requires effective and efficient strategies, processes, and procedures. It requires strong organization, capable of determining if what is needed technologically is technologically feasible and economically reasonable, with strong understanding of any unintended consequences. Those are three important questions that have to go into the whole life-cycle process.

The DHS Acquisition Management Directive, 102–01, updated in January of last year, provides a foundation of policies and procedures to support acquisition management at the agency. The issue, however, is whether the programs that result from these policies actually operate and function as intended and in a manner that is transparent to all parties.

Government and industry share the same goal: To provide for the technology and capabilities needed by TSA for mission success through processes that are transparent, accountable, coordinated, timely, cost-effective, and policies that encourage competition, innovation, and investment in the homeland security marketplace.

No one, particularly in these tough economic times, wants to see nor can afford to have their time, money, and resources wasted. Reform alone, however, at TSA will not solve the current challenges with technology acquisition. A truly successful processing system will require that component parts of DHS stop operating in silos and become more harmonized. While much progress has been made since its creation, DHS across all platforms, within all of its components, must work to achieve the development of a common operating picture that facilitates communication, collaboration, coordination, and cooperation in a triangulated fashion between and among operations; in this case, at TSA, R&D, and the procurement process.

Here are a few ways in which we belive that shared goal can be achieved:

First, develop a long-term acquisition strategy along with adequate and predictable funding. Particularly given the current economic environment, companies cannot waste time and money on

speculative technologies that they believe TSA might want to incorporate into security in the transportation arena. Industry needs greater insights and predictability into TSA's long-range acquisition and procurement plans. The information the private sector currently receives comes much too late in the process and is not detailed enough to enable it to redirect R&D investments to align with TSA's goals.

Second, develop procedures that encourage and allow an early and on-going dialogue with industry. DHS and TSA must facilitate early substantive engagement with the private sector in an open and transparent manner, long before an RFP or an RFI is initiated, that will encourage industry input to help define and calibrate technological requirements to match objective and achieve mission goals. The more complex the procurement, the more critical the need is for an open information exchange.

Such conversations between and among the interested parties sufficiently in advance of any specific procurement would not be tied to an upcoming project or program or contract, but would enable the Government to gather the information needed to help shape the desired outcome and define requirements long before a contract is initiated.

Third, technology testing requirements should be standardized. Technology testing and certification requirements need to be more transparent, realistic, consistent, and not cloaked in mystery. The process should rely on a clearly-defined series of lab, field, and operational tests under an open schedule to encourage technology companies to invest in new research, with more assurance that its investment will receive vetting and possible acquisition by TSA.

In conclusion, let me say: A harmonized acquisition process within DHS that encourages and utilizes early engagement and ongoing communication with industry will drive innovation and investment towards technologies needed for mission success. This process does not pick winners. Rather, it provides a foundation for competition at the very high level. The Council believes the actions I have outlined here as well as in my written testimony will go a long way to ensuring that TSA will be able to acquire the most effective and cost-efficient technology.

On behalf of the Council, I appreciate the opportunity to provide this collective perspective of industry on these important issues before the subcommittee.

I will answer any questions that you deem fit to ask.

[The statement of Mr. Pearl follows:]

PREPARED STATEMENT OF MARC A. PEARL

OCTOBER 13, 2011

Chairman Rogers, Ranking Member Lee, 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 involved with technology procurement at the Transportation Security Administration (TSA), particularly as they relate to innovation and job growth in 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. 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 integrated into our Nation's security.

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. In particular, many of our member companies specialize in the technologies and services needed and used by TSA.

The Council's testimony today will focus on providing the subcommittee with industry's perspective on how TSA, in particular, and the Department of Homeland Security (DHS), as a whole, can work more effectively with the private sector to improve the technology acquisition and procurement process and stimulate job growth. As recognized in the September 2011 Government Accountability Office Report on "DHS and TSA Acquisition and Development of New Technologies," TSA acquisition programs represent billions of dollars in life-cycle costs and support a wide range of aviation security missions and investments including technologies used to screen passengers, checked baggage, and air cargo. These technologies make up a significant part of TSA's annual budget and play a critical role in its ability to accomplish its mission.

The full acquisition life-cycle process is quite complex and requires effective and efficient strategies, processes, and procedures, and a strong organization capable of determining if what is needed is technologically feasible, economically reasonable, and will not result in unintended consequences. The life-cycle process begins with identifying a capability need; analyzing and selecting the means to provide that capability; obtaining the capability through the appropriate types of acquisitions; and producing, deploying, and supporting the capability through its useful life until disposal. If any infrastructure component is deficient, the entire process is at risk for failure.

The DHS Acquisition Management Directive 102–01, updated in January 2010, provides the overall policy and procedures to support acquisition management at the agency. While it offers a strong indication that acquisition management processes are in various stages of development, it is critical that the programs resulting from these policies actually operate and function as intended and in a manner that is transparent to all parties.

Government and industry share the same goal: To achieve the capabilities needed by TSA for mission success through processes that are transparent, accountable, coordinated, timely, cost-effective, and policies that encourage competition, innovation, and investment in the homeland security marketplace. No one, particularly in tough economic times, wants to see, nor can afford, to have time, money, and resources wasted.

Reform solely at TSA, however, will not solve the current challenges with technology acquisition. A truly successful process and system will require that component parts of DHS stop operating in silos. DHS—across all of its platforms, within all of its components—must work to achieve the development of a common operating picture that facilitates communication, collaboration, coordination, and cooperation in a triangulated fashion between and among operations at TSA, the research and development (R&D) process, and the procurement process. To achieve the shared goal, the Council strongly recommends the development of the following:

(1) A long-term acquisition strategy, multi-year budgets and deployment plans, and adequate and predictable funding;
(2) Open, transparent, and coordinated processes, practices, and procedures that facilitate early and on-going dialogue with the private sector and well-defined technology performance and testing requirements; and
(3) A strong organization that can coordinate both the R&D and procurement processes and has a workforce capable of planning and executing that process.

If the entire acquisition process is harmonized (and perhaps even "standardized") within DHS, and includes earlier and continuous engagement and communication with industry throughout the process, we can drive innovation and investment towards the technologies needed for mission success. This process does not pick winners; rather, it provides a foundation for competition at the very highest level. The Council believes these actions will go a long way in ensuring that TSA (as well as other components within DHS) can acquire the best, most effective, and cost-efficient technologies (as well as services and products).

1.DEVELOPMENT OF A MID- TO LONG-TERM STRATEGIC ACQUISITION PLAN, MULTI-YEAR BUDGETS, AND ADEQUATE AND PREDICTABLE FUNDING

The private sector serves an important role in developing, testing, and providing the technologies that TSA needs to operationalize its mission. Industry, however, does not have limitless resources to devote to technology development in a void. Par-

ticularly in the current economic environment, the private sector cannot waste time and money on building speculative technologies that they believe TSA "might" want to incorporate into aviation security. Industry wants to develop and deliver the technologies that TSA needs now and long into the future. To accomplish this, the homeland security industry must have greater insight and predictability into TSA's long-range acquisition and procurement plans. It currently only receives high-level, near-term technology plans in the form of an annual Congressional budget justification. This information comes too late and is not detailed enough to enable industry to redirect R&D investments to align with TSA's goals. Development and testing typically requires several years before a security technology is ready for implementation and deployment.

The Council strongly believes that TSA must strive to develop a mid- to long-term strategic acquisition plan and consider the possibility of multi-year budget plans. A strategic acquisition plan would provide all interested companies with an insightful blueprint for Government's future needs, and give them the necessary time to align and focus financial and personnel resources towards addressing the highest-priority needs. While no doubt difficult to do under the current budget approval process, Congress and the Department could work together more closely to develop multi-year budget plans, or at least a credible forecast of future budget activities at the time of an annual budget justification. This would provide all interested parties, including and particularly industry, with a level of certainty needed to make multi-million dollar technology investments and hiring decisions.

TSA could also improve transparency in the acquisition planning process by sharing, through appropriate channels, the relevant findings, from the Transportation Sector Security Risk Assessment. Sharing long-term technology acquisition and deployment plans, including a prioritized, risk-based, multi-year list of required capabilities and intended deployment plans would help industry provide more timely and cost-effective solutions. New technology development is hindered when industry is uncertain as to whether DHS will undertake testing, much less purchase newer, higher-performing systems.

In conjunction with budget forecasts, it is also critical that TSA have confidence that it will receive adequate funding to address evolving threats. Enhanced budget planning and communication of budget requirements will result in taxpayer savings and increase industry's ability to understand whether business risk justifies future job creation. Any and all assistance that Congress can provide in guiding the development of a mid- to long-term strategic acquisition plan, multi-year budget plans, or ensuring adequate funding for TSA would go a long way in providing the foundation for all interested parties to achieve mission success.

2. DEVELOPMENT OF OPEN, TRANSPARENT, AND COORDINATED PROCESSES, PRACTICES, AND PROCEDURES THAT FACILITATE WELL-DEFINED TECHNOLOGY AND TESTING REQUIREMENTS

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

The private sector wants to develop and provide the capabilities that TSA (and the entire Department) needs to achieve mission success. To accomplish this, it is incumbent upon Government to provide industry with well-defined technology and testing requirements. If the technical performance needs and testing requirements for technologies are not clear to industry, it increases the potential for an increased or lost cost of development, longer time before deployment, duplication of effort, and a resulting product or technology that fails to meet TSA's expectations and operational needs. Well-defined requirements also help motivate industry and are critical to promoting competition.

Defining mission needs in a clear and concise fashion is not a job that Government can or should do alone. DHS and TSA must develop coordinated processes, procedures, policies, and practices that facilitate early, substantive engagement with the private sector in an open, transparent, and predictable manner long before a Request for Proposal (RFP) is initiated. Industry input is essential to help define and calibrate technical 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 in this process is also necessary to ensure that no one feels that a particular technology is being highlighted or unfairly selected. If all participants understand and adhere to "rules of engagement," that are both predictable and consistent, we can optimize the input and exchange between Government and industry.

The members of the Council strongly support DHS engaging the private sector by conducting more conversations or discussions surrounding general needs and con-

ceptual frameworks that are NOT tied to any upcoming or projected program or contract. Whether called "Industry Days" or something else, such interactions between and among the interested parties sufficiently in advance of any specific procurement will enable Government to gather the information needed to help shape the desired outcome, define requirements, identify what is economically reasonable and technologically feasible, and allow all interested parties to explore any unintended consequences before a contract is initiated.

Contracting professionals in Government often have a limited understanding of what industry is (or may not be) capable of providing, and limited exposure with the skills, business practices, and experiences of potentially valuable companies. By engaging with the private sector long before the procurement process begins, DHS personnel, for example, can conduct more effective market research and gain a greater understanding of existing and emerging technologies, including Commercial Off The Shelf (COTS) products, which may offer significant opportunities for reduced development time, faster insertion of new technology, lower life-cycle costs, and an overall substantial cost savings to Government. This type of engagement with industry would allow Government to understand the business practices supported by the commercial item, 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 has been in on-going discussions over the past year with representatives from the Science and Technology (S&T) and the Management Directorates to begin to address some of these needs and issues to further the goal of transparency and how best to achieve mission success. We have raised the idea, for example, of creating a Government-industry advisory council that could coordinate an open dialogue on specific topics that could bring about a greater understanding between the two sectors, such as having industry days earlier in the process. A jointly-led advisory council could conduct work sessions to share perspectives on the timing, manner, and substance of communications, and the best ways to conduct industry days so that both sectors receive mutual benefit. We are currently exploring options for how to facilitate such an important and potentially effective activity.

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. This is another manner for 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 industry 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. Standardize Technology Testing Requirements and Speed Up the Process for Certification by Using a Clearly-Defined Series of Lab, Field, and Operational Tests That Can Be Provided by Third Parties

The process by which DHS tests technology is not standardized. TSA uses a series of lab, operational, and field tests to validate some equipment but not all equipment. Other components, like Customs and Border Protection, rely on a single demonstration test every 5 years to evaluate inspection equipment. The lack of consistency and continuity creates a great deal of unpredictability and inefficiency, which can cause delays in deploying the most up-to-date, qualified technology in a cost-effective manner.

DHS must do more to communicate with industry to ensure that technology testing and certification requirements are realistic, consistent, and not cloaked in mystery. It must develop a process that relies on a clearly-defined series of lab, field, and operational tests on a rolling schedule to allow for the testing and validation of new technologies. An open schedule will encourage technology companies to invest in new research with more assurance that its investment will receive vetting and possible acquisition by DHS.

The current process for testing and certifying new technologies is often confusing, cumbersome, and can result in wasted time, money, and resources. DHS needs to provide industry with greater transparency into the process and should also con-

sider alternative arrangements, such as paying a third party to test and certify the technologies based on standards established by the Government. This is something that has been successfully done in the United Kingdom. The use of National labs, non-profits, or for-profit corporations for this process could greatly speed up the deployment of technology to TSA.

3. DEVELOPMENT OF A STRONG ORGANIZATION THAT HAS A COORDINATED ACQUISITION PROCESS AND A WORKFORCE CAPABLE OF PLANNING AND EXECUTING THE PROCESS

A. Development of a Coordinated Acquisition Process That Links Operations, R&D Efforts, and the Procurement Process

DHS needs a stronger, more coordinated acquisition process that moves away from the current stove-piped environment and can harmonize and link operational considerations with R&D efforts and procurements. While much progress has been made since its creation, DHS still has more work to do in ensuring collaboration, coordination, and communication across the agency.

The Council believes that it is critical to implement an acquisition process that facilitates effective engagement between and among DHS' components and with the private sector. There are at least 11 unique procurement and R&D processes occurring across the agency. Large components run their own processes in different ways and many times inconsistently. This can result in duplicative efforts.

Current R&D efforts are spread not only among different component organizations within DHS but also across Federal agencies. The S&T Directorate is highly dependent on other Federal agencies to achieve its mission. There does not appear to be a clear strategy for how to do it effectively and in collaboration with the Department of Defense, the Department of Energy, NIST, and other scientific organizations. This lack of collaboration may result in duplicative efforts and unleveraged technologies. To increase the likelihood of success, Congress should determine whether the S&T Directorate needs greater authority to perhaps direct the Government-wide R&D agenda, rather than having to compete against numerous organizations inside and outside of DHS.

With more communication within and among Federal agencies, DHS has the opportunity to effectively link efforts and identify potential technologies that it could leverage in support of other missions. The development of a standardized and coordinated 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. If we can improve coordination of these programs and processes throughout the Department, it will contribute to a strong organization and we will get better results with procurements at TSA.

B. Ensure a Workforce Capable of Planning and Executing the Acquisition 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 also long advocated, for example, that DHS develop an exchange program with the private sector to improve the management abilities and the 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 both R&D and 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. There are

a few programs that bring private sector experts into Government, but none, as far as we know, that encourage or permit public sector employees to be temporarily detailed into the private sector to gain the knowledge and/or perspective that would help them better understand the multiple factors that go into the relationships between R&D, procurements, and operations.

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, predictable, timely, cost-effective, and that encourages competition, innovation, and investment in the homeland security marketplace. Today's acquisition process and specifically the procurement process 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 in particular to discuss how we can best develop a dialogue that identifies a successful process that could lead to even more effective and efficient innovative solutions to protect our country. But even amidst the establishment of these relationships, the business sector, as a whole continues to struggle to comprehend the long-term strategic needs and goals of TSA. This has made our long-term investments toward new and innovative technologies that might become effective solutions, challenging at best.

We respectfully ask Congress and this vital and interested subcommittee to consider the following recommendations, provide guidance and continued oversight, and help facilitate the dialogue necessary between industry and Government to improve the process and outcome for all stakeholders:

(1) Development of a long-term acquisition strategy, multi-year budget plans, and predictable and adequate funding for TSA;
(2) Development of open, transparent, and coordinated processes, practices, and procedures that facilitate well-defined technology and testing requirements; and
(3) Development of a strong organization with a standardized and coordinated acquisition process and a workforce capable of planning and executing the process.

While TSA in particular and the Department as a whole are still evolving, this is not about "reinventing the wheel," but rather identifying and encouraging the many best practices and lessons learned available from other Federal agencies that have decades of experience with 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. ROGERS. Mr. Boylan, you are recognized.

STATEMENT OF SCOTT BOYLAN, VICE PRESIDENT AND GENERAL COUNSEL, SAFRAN MORPHO DETECTION

Mr. BOYLAN. Morpho has three companies that supply to TSA: Morpho Trust, which I am an employee of; Morpho Detection, which is a leading provider of explosive detection to TSA; and Morpho Track, which is a leading provider of automated fingerprint systems that the FBI uses and they are used in various applications at TSA as well.

We are also a leader in identity technologies that are used in the TWIC program and a number of other programs. So TSA is a very important customer of ours.

Just a footnote. Morpho, a commonality that crossed our businesses is algorithms, algorithms that enable us to make decisions in the security context. Morpho is a type of algorithms mathematics and that is why we have that name. I heard that question in your voice, Mr. Chairman.

I have three points to make.

One, the first is engagement. I echo Mr. Pearl's comments. Pre-engagement with industry, discussing the possibilities and the limitations and the fundamentals of what technology can and cannot do, is very important for TSA and especially for TSA policymakers. When I was at the Department, I have to say we were a bit remiss in understanding these capabilities. I think not just the technology people, but also the policymakers need to know not at a micro level, but at a certain baseline, what technology can and cannot do. That enables you to make good policy decisions.

Constructing a way to engage with TSA, industry and TSA, is something I think is necessary because in my experience with folks at TSA, they want to engage, they want to talk, they do talk. But they also have a certain hesitation because it is not really clear what bright-line engagement rules are for them. I think clarifying that for the employees could go a long way to making that interaction more fruitful.

Second is phased implementation of technology as opposed to here is what we want the technology to do, a long laundry list, and trying to deploy that. What happens is you have years of experimentation before you get a deployment, as opposed to deploying the basics and improving from that baseline.

We have a very clear example of this from the very beginning of TSA. We have been providing TSA explosive detection equipment that scans bags since the creation of TSA, and the initial deployment of that technology met a baseline that wouldn't get certified today. Many of those machines that were deployed at the beginning, I have to say Reagan Airport is one of them, you can see our machines there, they are the early version, those machines have the capabilities that are required today because they have been updated in place.

So there is the capability of deploying machines, deploying technologies at a baseline, and raising that if you plan for it. That system, it was planned for. So I recommend that that is something that TSA look into for most of their deployments.

Finally, a recommendation in the international field and international standards. In the European Union, for example, E.U. Commission passed a regulation that was to go into effect next year that basically required the adoption of the American-style system of screening baggages by deployment computer tomography, CT machines that we use here in the United States at level one as the first instance of screening. Industry airports in the European Union have pushed back on that because of the expense, and it has been pushed out to 2014.

TSA has largely been uninvolved, not engaged in this discussion. That is an area where we could really have a big impact on jobs and the economy, because right now the CT industry, all of the certified equipment around the world, is made here in the United States. That is an opportunity that we have for our economy here to grow vis-á-vis TSA.

Thank you for your time. I am happy to answer any questions.

[The statement of Mr. Boylan follows:]

PREPARED STATEMENT OF SCOTT BOYLAN

OCTOBER 13, 2011

Chairman Rogers, Ranking Member Jackson Lee, and Members of the subcommittee: Thank you for holding today's hearing on TSA procurement and how TSA's technology procurement can stimulate economic growth. My name is Scott Boylan and I am Vice President and General Counsel of MorphoTrust USA Inc., a subsidiary of the Safran Group, the largest biometrics company in the world. I was most recently the Vice President and General Counsel of Morpho Detection, Inc. ("MDI"), the second of three Morpho security companies that provide security technologies related to detection and/or identification to TSA, the Department of Homeland Security ("DHS") and U.S. Government more broadly.

MorphTrust has more than 1,000 employees in the United States and is headquartered in Massachusetts. We offer a comprehensive set of products and solutions for protecting and securing personal identities and assets—leveraging the industry's most advanced multi-modal biometric platform for finger, face, and iris recognition, document authentication, secure driver's licenses and identification cards, and passports. MorphoTrust is a global leader in providing Secure Identity Management solutions across Government and commercial markets.

MDI has more than 560 U.S.-based employees with factories in California and Massachusetts. We are a leading supplier of explosives and narcotics detection technology world-wide. Our technologies support Government, military, transportation, first responder, critical infrastructure, and other high-risk organizations. We integrate computed tomography (CT), Raman Spectroscopy, trace (ITMS technology), X-ray and X-ray Diffraction (XRD) technologies into solutions that deliver detection results quickly with a high degree of accuracy, while ensuring efficient security operations. MDI has been a supplier to TSA since its creation.

MorphoTrak has more than 541 employees in the United States with major facilities in New York, California, and Washington State. We provide biometric and identity management solutions to a broad array of markets in the United States including law enforcement, border control, identity cards, civil identification, and facility/IT security. We are a leading innovator in large fingerprint. MorphoTrak has provided biometric identification solutions in the United States for over 35 years and provides State-wide biometric identification systems in 28 States plus the District of Columbia. Our products are used by more than 300 city, county, and State government agencies across the United States.

INDUSTRY GOVERNMENT PARTNERSHIP: ADVISORY COMMITTEES

A continuous challenge doing business with TSA is the lack of visibility into its future acquisition plans. The Chairman has recognized that this is a challenge for industry and has encouraged TSA in previous hearings to be more open and communicative with private-sector partners. We believe that a formal mechanism, such as an advisory panel consisting of industry and technology stakeholders, would be an excellent vehicle for exchanging information for both industry and TSA. TSA should set goals for industry and work with industry to create high, interoperable standards.

Having visibility into future TSA procurement plans gives key guidance to industry in making employment, manufacturing, and inventory decisions. TSA would also benefit by reduced costs associated with its technology suppliers being able to more efficiently purchase inputs for their products with better planning and more efficient procurement of parts. Transparency will also allow for stabilization of manufacturing operations and avoid employment disruptions that many in the industry have seen.

The Morpho companies spend millions on research and development of security technologies. This effort can be more efficiently targeted when TSA's future plans, strategy, and vision are known. For example, a Morpho company recently was awarded a TSA contract for traveler document authentication. We were willing to dedicate significant resources and investments to develop this technology for TSA, without a guaranteed return, because when TSA issued requirements we then knew what TSA wanted. This is the scenario we need to recreate going forward. We believe that this will become the standard practice as TSA continues to improve and invest in its procurement system.

PHASED ACQUISITIONS

TSA should use phased acquisitions when moving into new and developing technology areas. Initial procurements should focus on basic requirements and follow-

up procurements should push for increased performance and options. An example of this is EDS standards that started with a high threshold and have continually gotten more difficult to achieve in subsequent procurements. This has allowed for the initial broad deployment of baggage screening equipment immediately after 9/11 and contributed to a constant improvement in detection capabilities up to today.

ADVOCATING FOR STRONGER INTERNATIONAL AVIATION SECURITY STANDARDS=HIGHER U.S. JOBS AND SECURITY

TSA is in a unique position to influence the security standards used around the globe. Our company provides security technology around the world, much of which is made in the United States and shipped overseas. We see in numerous international procurement solicitations that the standard required by airports and governments around the world is the TSA technology standard—especially explosive detection standards. TSA or E.U. certification is often required before a manufacturer can bid on a contract. We have seen this in many countries with emerging security standards that do not have the resources to conduct their own testing.

We have also witnessed TSA's reluctance to strongly advocate for their superior standards in international markets. A key example is the European Union where the Commission has adopted standards for checked baggage screening that would require in the future deployment of computed tomography machines at the first level of screening. This is effectively the system used by TSA in the United States today. The E.U. standards currently permit X-ray technology to scan checked bags, but TSA and the European Union have both recognized that X-ray technology has challenges screening for certain threats that CT technology does not. Despite the regulation change and the recognition of a security concern, there has been strong resistance to deploying CT technology at level one in Europe by European stakeholders who would have to invest in the technology. TSA has largely stayed out of this debate. But this is where they have the opportunity to both increase the level of explosive detection capability in a region that is a key to U.S. aviation security and open a potentially huge market to what is predominately a U.S. industry. Adoption of CT at level one in the European Union would create a market for CT in Europe that would be larger than in the United States. All of the currently certified CT technology in the world is manufactured in the United States.

Once this standard becomes a U.S. and E.U. standard it will likely become a de facto global standard that increases aviation security around the globe—and jobs and economic activity in the United States.

Thank you.

I will be happy to answer any of your questions.

Mr. ROGERS. Thank you.

Mr. Ben-Ari, you are recognized.

STATEMENT OF GUY BEN-ARI, DEPUTY DIRECTOR, DEFENSE-INDUSTRIAL INITIATIVES GROUP FELLOW, INTERNATIONAL SECURITY PROGRAM, CENTER FOR STRATEGIC AND INTERNATIONAL STUDIES

Mr. BEN-ARI. Thank you, Mr. Chairman. Thank you for the opportunity to come before the subcommittee on this important issue.

I would like to provide a few overall DHS trends based on a report that was recently published. We use publicly available data to look at contract spending at the Federal level for various departments and agencies, and the data I will be presenting is from a recent report on Department of Homeland Security with a little of the more drilled-down into the TSA data.

Overall, the numbers for DHS are pretty steady in terms of contract spending. In the period we looked at from 2004 to 2010, contract spending stood at about $13 billion to $14 billion a year, every year. This is a good thing for internal planning and budgeting purposes. DHS internally knows that it has a steady stream of contract dollars that it can then award to the private sector. The

private sector has a clear signal from the DHS customer that there is a steady contracting dollar amount that it can plan against.

About 70 percent of contract spending by DHS is spent on service contracts. The rest almost entirely is spent on products as we will talk about in a minute, relatively small portion spent on R&D contracts, research and development contracts. In fact, research and development contract spending fell from around $700 million spent in 2004 to about $400 million spent last fiscal year, fiscal year 2010. Those $400 million amounted to about 3 percent of total DHS contract spending that year.

Our report also looks at—sorry. One more word on research and development before I move on, because I think this is an important topic for this subcommittee and this hearing.

About one-third of DHS contract spending on research and development is actually spent on research and development management and support contracts. So it is important to make that distinction because these are contracts that do not buy for the Department of Homeland Security actual research and development. They are instead supporting facilities, laboratories, test equipment and so forth, and when counting overall R&D dollars, it skews the data a little bit if you include that, what in DHS is a significant amount is R&D spending.

In terms of how DHS has competed its contracts and how well the industrial base has responded to that competition, a large majority—about 75 percent of DHS contracts are awarded competitively—are competed. About half of them receive more than multiple offers from the industry side.

The way that the Department of Homeland Security has spread out those contracts to industry has also been relatively spread out in terms of the distribution to small, medium, and large companies. In DHS, large companies receive about 40 percent of the contract with small- and medium-sized companies receiving about 30 percent each. This, compared to other Government departments is a very, very diversified spread of the contract dollars.

Specifically for TSA, we ran similar data, and for the most part the trends for overall DHS contract spending are reflected in TSA's contract spending. That is to say, there is a relatively steady amount year over year at about $2 billion dollars a year. About three-quarters of that goes on services, and about $500 million goes on products. A much smaller share in TSA goes to R&D, and that is down significantly, from around $380 million in 2004 to almost $6 million in 2010. Even there, of those $6 million, about one-third is R&D management and support of contracts I referred to earlier.

In terms of competition and the industrial base, the picture is slightly different for TSA than from DHS overall. Only about half of the contracts that TSA awards are competed and receive multiple offers. The share of those contracts that goes to the large companies in the industrial base is much larger as well. In 2004 it was 56 percent, with about 21–23 percent awarded to small- and medium-sized companies respectively.

Just two quick points. I know I am short on time.

Two quick points in conclusion. The first is that our report, as most of our other reports, in this case was not intended to answer specific questions or address a specific trouble or issue. It was

purely data-driven. We felt there was a lack of good data on the Department and on its components, and our aim here was to put forward that data, and we are happy to cut this data any other way as is necessary for the betterment of the analysis and the planning that goes on in DHS and in Congress.

The second comment is that specifically on R&D again, the importance of making that distinction between R&D overall and then the components of research and development, specifically that component of management and support research and development contracts which do not directly contribute to the R&D effort.

Thank you very much. I look forward to your questions.

[The statement of Mr. Ben-Ari follows:]

PREPARED STATEMENT OF GUY BEN-ARI

OCTOBER 13, 2011

Chairman Rogers, Ranking Member Jackson Lee, and Members of the subcommittee, I appreciate the opportunity to appear before you this afternoon as part of this distinguished panel to offer my views on contracting trends in the Department of Homeland Security and the Transportation Security Administration. I would note that my statement draws on research undertaken at the Center for Strategic and International Studies (CSIS) but that the statements and conclusions are my own and do not necessarily represent the views of CSIS.

The Defense Industrial Initiatives Group (DIIG) at CSIS recently undertook a study on contracting trends in the Department of Homeland Security (DHS) between 2004 and 2010. Although DHS was enacted by law in 2002 and created as a separate entity in 2003, our analysis begins with the year 2004 as it was the first full fiscal year of DHS operations. We used the Federal Procurement Data System (FPDS) as our primary source of data. All dollar amounts in the report and in this testimony are obligated dollars as reported in FPDS and are in 2010 constant dollars.

In this testimony I plan to first provide an overall view of DHS contract spending on products, services, and research and development (R&D), then present data for the Transportation Security Administration (TSA), and conclude with final comments.

OVERALL DHS CONTRACTING

DHS has kept its overall contract spending levels steady at around $13–$14 billion per year since 2005 (with the exception of Katrina response in 2006). Responses to unexpected events such as natural disasters and attempted terrorist attacks have largely been funded by other outlays, including personnel accounts and grants to State and local governments.

This stability in contract spending enables DHS managers to conduct long-term planning and programming with the knowledge that, barring unexpected developments, they can accurately predict the funding levels in future years. A steady budget over several years also sends a clear signal to industry that, overall, there is stability and continuity in DHS spending that is contracted to the private sector. However, the fact that there has been no growth in contract spending also means that there is currently very little cushion in this category as the Department moves into a period of budget cuts and greater fiscal austerity.

The majority of DHS contracts—60 percent to 75 percent each year—are awarded for services. Within services, the majority of contract dollars—worth $27 billion for the period 2004 to 2010—were spent on professional, administrative, and management services (PAMS). The second- and third-largest service categories, by value, were facility-related services (including construction) and information and communication technologies (ICT), at $16 and $14 billion, respectively. Total DHS spending on services for the years 2004–2010 increased by 85 percent, much more than it did for products. Between 2007 and 2010, annual spending on services stabilized at around $10 billion.

DHS SPENDING ON R&D

DHS spending on R&D contracts dropped, from $675 million in 2004 (when it was 8 percent of contract spending) to some $400 million in 2010 (when it was 3 percent

of contract spending). In comparison, the Department of Defense in 2010 spent 11 percent of its contract dollars on R&D (not including classified R&D, which, if included, would significantly raise the R&D share). Note that as per the norm in all CSIS/DIIG research, R&D management and support contracts, though classified as R&D contracts in FPDS, are counted as service contracts and not R&D contracts.

This leads me to an important point on DHS R&D contract spending. From 2004 to 2010, a total of $4.4 billion was spent on actual R&D contracts and $1.7 billion was spent on R&D "management and support" contracts, i.e. contracts for the operation and maintenance of research laboratories and equipment. In other words, almost 30 percent of DHS dollars spent on R&D contracts between 2004 and 2010 was not spent actual R&D and should be excluded from R&D data for the purpose of assessing R&D funding.

COMPETITION AND CONTRACTOR BASE

In 2010, nearly half of DHS contracts were openly competed and received multiple offers, up from 38 percent in 2004. In parallel, contracts that were not competed have been on the decline at a rate of 18 percent per year, on average, to a share of 13 percent of total contract dollars.

DHS has been spreading its contracts to a wider contractor base. In 2010, the top 20 DHS contractors accounted for 34 percent of total contract spending, compared to 43 percent in 2005. DHS contracts with a significant number of commercial companies (primarily in the IT domain) in addition to the traditional defense and security contractors.

DHS has been consistently contracting with small and medium-sized companies. In the past 3 years, about 40 percent of contract dollars have gone to large companies (those with annual revenue of $3 billion or more), 30 percent have gone to medium-sized companies, and 30 percent have gone to small companies. By comparison, the Department of Defense in 2010 spent 56 percent of its contract dollars on large companies, 30 percent on medium-sized companies, and 18 percent on small companies.

TSA

Contract spending levels at TSA have been relatively steady from 2004–2010, with about $2 billion spent each year. Of that amount, some $500 million are spent each year on product contracts (baggage screening technology, advanced imaging technology, etc.), some $1.5 billion are spent on service contracts (screeners, maintenance of products procured, etc.).

R&D contract spending at TSA dropped dramatically, from $381 million in 2004 to $3.8 million in 2010. This drop is in part explained by a reclassification earlier this year of some $170 million from R&D management and support contracts to services contracts. In addition, TSA spent $1.8 million in 2010 on R&D management and support services, 32 percent of its total R&D contract spending.

Some 55 percent of TSA contracts were competed and received multiple offers, a share similar to that of DHS as a whole. The share of uncompeted contracts dropped from 38 percent in 2004 to 33 percent in 2010 yet remains higher than the DHS-wide share of 18 percent uncompeted.

Regarding the industrial base supporting TSA, 56 percent ($1.1 billion) of TSA's contract dollars were awarded to large companies, 21 percent ($410 million) were contracted to small companies, and 23 percent ($450 million) went to medium-sized companies. Furthermore, the top 20 TSA contractors in 2010 accounted for 42 percent of contract dollars obligated, compared to 45 percent in 2004. Of the top 20 in 2004, 14 remained on the list in 2010.

CONCLUSION

Mr. Chairman and Congresswoman Jackson Lee, distinguished Members of the subcommittee, I would like to close with two comments.

First, our research on DHS contract trends was not intended to answer a specific question or address a particular problem. Rather, it was intended to present the facts as they arise from publicly available data. Given that, we found that DHS contract spending was overall stable over time, with a majority of contracts openly competed and awarded across a broad industrial base that includes companies of varying competencies and size. TSA exhibited similar trends in budget stability and share of competed contracts, but has been awarding contracts to a less diverse industrial base.

Second, our findings raise several important questions that the data are unable to answer. With regard to R&D, the issue of how we can measure the outcomes of actual R&D contract spending deserves greater attention. A first step would be to

separate R&D management and support services from actual R&D contracts. More importantly, measuring any kind of R&D spending is an input metric that says nothing about R&D productivity and innovation, which are the issues we are really interested in. For a better understanding of these issues, new analysis is needed that assesses TSA's success in delivering new capabilities to better undertake its missions.

With that, I conclude my remarks and look forward to your questions.

Mr. ROGERS. Thank you.

I will start off with the questions.

I was struck by that number when you said it dropped to $6 million. To what do you attribute that?

Mr. BEN-ARI. So there are two factors in play here. The first one is that as other sectors in the Department of Homeland Security grew, namely service and products, something had to give. That something in the past 7 years was research and development. The numbers are down for—Department-wide, they are particularly starved in TSA's case.

The second reason is that in recent years, there has been a reclassification of the contract dollars awarded away from the research and development classification towards professional services classification.

So it is not that less work was undertaken. In some of the cases, it was just undertaken under a different type of contract classification.

Mr. ROGERS. Mr. Boylan, you made reference to the concern that some folks in DHS have with talking with the private sector. To your knowledge, there are no policies that guide them as to the extent to which they can interact with the private sector without getting in trouble?

Mr. BOYLAN. It depends on the context. Within the contracting context, absolutely. Under the FAR, there are clear guidelines, from my perspective.

What I was talking about is the pre-acquisition process, the understanding of the possibilities and the limitations of the possibilities. In that context, we have not had very good conversations as of late. At the policy level is what I am talking about. At the technology level, we have these questions. But I think it is important for policy people and people who are deciding policy to understand what technology can do and cannot do.

Mr. ROGERS. So you would like to see the Department establish some guidelines so that format could be established?

Mr. BOYLAN. I know there has been a recommendation to creating an advisory board that would have that type of capability.

Mr. ROGERS. Does the DOD do that now? Do they have that kind of format set up?

Mr. BOYLAN. Yes.

Mr. ROGERS. That has been one of my goals is to see the Department emulate more of what DOD does, because they have been around so long and they have kind of stepped on all of the rakes and they know what not to do. But we are seeing DHS has not been pursuing that course of action. Because I do want to see what you are talking about. I want to see an on-going dialogue about the challenges that the Department is facing with the private sector, to see what is possible, and do it very early before you start developing the RFPs. To my knowledge, none of that—and I hear regu-

larly about how frustrated the private sector is about trying to just talk with somebody.

But Mr. Pearl, what would be the thing that you would most want to see them do as far as new guidelines? Is it that early dialogue?

Mr. PEARL. Mr. Chairman, we have begun a process with some of the folks below the kind of HQ level, with some of the Under Secretaries. The Council is facilitating dialogue, for example, with the Under Secretary of S&T, with Dr. O'Toole. We have begun a dialogue with the Under Secretary of Management, Rafael Borris, the idea being in his team, the idea being is that the management component part over which the Under Secretary is responsible for, he does have on-going oversight authority to even rein in some of the procurement issues, and I think there are like 10 or 11 different procurement acquisition kind of different silos going on, but he does have a certain amount of oversight.

However Dr. O'Toole has not been given those kinds of tools and does not have that oversight. So if the administrator of TSA or the administrator of any of CBP or any of the component parts, wishes to do their own R&D, they can do it without any semblance of necessarily communication. So we have been working with them on how we can have those dialogues.

They call them industry days. The fact is that that language basically says, we have developed an RFI and RFP, we know what the contract is going to be, and we will call in industry and we will basically read you the *Federal Register* report. What our discussions have been, and we have gotten a little bit further than we have in the past, because it all depends on general counsel accepting it, it all depends on ethics, those kinds of things, that if we can have those discussions in conceptual framework, along the lines of what Mr. Boylan and I were discussing, long before, to figure out—because nobody, whether it is in the public sector or in the private sector, can expend R&D resources anymore for what we think TSA in this case might want. That is part of the discussion.

We have begun to move that ball, that needle, a little bit, and we are trying to get through the clearance. One of the things is the possibility of forming an industry-Government council outside of the normal kind of structure that would be kind of co-chaired by public sector and private sector, facilitated by organizations like the Council and other organizations that would be part of it so that we can get all of the players and interested players around the table.

Mr. ROGERS. You may not know the answer, but does the DOD have some process—you mentioned a while ago that they have these preliminary discussions. What do they call it? It is not industry days. How do they format it?

Mr. BOYLAN. They have industry days that are interactive. What the criticism of DHS has been quite recently is that they come in and read and they don't discuss with the people that attend. It is a different atmosphere at DOD.

Mr. PEARL. I don't think that this is something that should be either DOD- or DHS-model component. In many respects, DHS is a law enforcement agency in some respects, not a kind of National security agency. I think that the CIO who came in from the IRS

has certain plans in terms of technology, and I think that Mr. Squires has been trying to push that kind of model.

So I think that the lessons learned interagency, not just looking at the DOD model, but looking at how things across the board, whether it is in Veterans or Education or Interior, how does the process and how does the discussion about acquiring technologies in this case—what do you go through? There should be lessons learned both up-side and down-side, and those would go to the three questions I stated.

Is it even economically reasonable in this environment, is it technologically feasible? We don't want things that can't be done. What are the unintended consequences? Those are the three things that we think should be asked across the board all the time.

Mr. ROGERS. We have passed the subcommittee mark on the TSA reauthorizatioin. We are about to bring it to full committee next month. Is there something in the authorization bill that would be necessary or helpful, in your view, on this matter that you would like to see us include at full committee mark? That is for any one of you.

Mr. PEARL. Just briefly, I would like to see the Congress take a more encouraging supportive role. It doesn't always have to be the passage of law that says this is the law that you have to follow. I think that the nature of—and certainly our written testimony went to that—that Congress has an important role to encourage this kind of dialogue; to encourage exactly what the two of us have been saying, to come out of an authorization, not out of an appropriations approach; to come out of authorization that says we give a sense of acceptance and support for that kind of approach. That would help everybody and all of the parties get in the room, and I think if they heard that kind of bully-pulpit statement from the Congress, that should be part of it. We have submitted suggestions for that kind of approach to the staff director and to the folks on the Committee.

Mr. ROGERS. Mr. Boylan.

Mr. BOYLAN. I agree. We didn't coordinate our testimony before this, Mr. Chairman. I think providing that guidance and high-level cover, to the career-level employees especially, that will give them comfort in engaging with us and together hopefully we can achieve some good things.

Mr. BEN-ARI. Just one point. I completely agree on this topic of Government-industry coordination dialogue. I would just like to emphasize the point that internal dialogue discussions are not less important, and there are efficiencies to be gained. From a better dialogue across the various DHS components, especially when it comes to research and development, especially when it comes to acquisition, there are enterprise-wide or mission-wide elements that cut across programs and components. If those programs and components came together to put together a common requirement, common standard, and a common acquisition program, I think there are efficiencies there for the Department.

Mr. ROGERS. In response to one of the things I think that Mr. Boylan brought up. We did have a full committee mark this morning on the authorization. There was an accepted amendment by Mr. Duncan to DHS that requires future-year investments. It pro-

vides that the private sector—it will provide the private sector with budget projections so you will see some investment predictabiltiy going forward, which I think will be helpful.

Mr. Richmond is recognized for any questions he may have.

Mr. RICHMOND. To start with, when you talked about the industry days, and just from someone who is not familiar with how industry gets their ideas and new technology over to the right people in DHS or TSA, walk me through a company who either did their own research or came up with their own technology. How do you get an audience with TSA or DHS to inform them of that technology if you don't have technology showcases and things like that?

Mr. BOYLAN. I guess I am the company guy, so I get to answer that.

I have seen varying approaches. One thing that our technology department does is they will write an unsolicited white paper: Basically, here are some capabilities we have come across; are you interested? Sometimes that begins a dialogue.

Sometimes it is a discussion around a current technology that is being procured by TSA where we have seen improvements of various sorts, or capabilities that could be added or developed into that technology, and you can have those discussions as well.

Industry days, like I said, one of the criticisms is that usually it is TSA laying out a PowerPoint of what they want and what they expect. Then what has happened in the past is then industry comes in and often, unfortunately, this comes in through a bid protest that your requirement has a problem of a number of sorts. I can think of a few procurements that have been dragged out for multiple years because of this. If you would have had the engagement at the beginning, a lot of that could have been avoided.

Mr. RICHMOND. To that solution, you recommend an advisory council, is that one of your ideas to navigate through that?

Mr. BOYLAN. One of our suggestions is to have an advisory council where these types of discussions could take place.

Mr. PEARL. It is important, I would add, that individual companies early on in the process, from 2001 to 2005—you know, I am picking numbers—we are trying to knock on the door of the components of the directorate to say we have got the greatest, latest product, technology, or whatever. It wasn't necessarily tied to what was being asked for, it was tied to what they had developed and what they had determined to be the need. Pre-oil spill or whatever. I think that the context was the Department kept saying no, that is not our priority right now. That is not what we want to do.

So what we are trying to do is develop a dialogue where we would understand in the long run, and what Mr. Duncan in terms of multi-year funding should also be multi-year policy, you know, to make sure of what long-term strategies are. What are we looking for around the curve? At which point Government and industry together can discuss conceptually what is it that Government is going to need to maintain a high level of security.

I think that the problem has been that focus has been on contract rather than on capabilities. It is on the checking of the box rather than the nature of what we are trying to achieve in mission. I think that if the two sides could get together to say this is what our mission, this is what our goal, this is what we want to achieve,

what can industry bring capability-wise to meet that mission, then we will work out the contracts down the road. We will work out what the procurements are. We will allow in this kind of format of a council all of the interested parties in the room, not just one who happened to knock loudest or shout louder. We want a fair process and that is exactly what we are trying to call for.

Mr. RICHMOND. I guess this question would probably go to Mr. Ben-Ari, which is: In your opinion, what are some of the most surprising key findings regarding the DHS and S&T contracting?

Mr. BEN-ARI. I think it would have to be the fact that so much is actually spent on service contracts that are not directly contributing to the research and development mission. Again comparing, for example, the Department of Defense, a different animal, with a $75 billion annual R&D budget, but for that budget they spend about $1.5 billion on what is classified as management and support, R&D management and support contracts. That is about 4 percent. In DHS that is 30 percent. There is something strange about this picture. I am not an expert on TSA's S&T funding and contract spending. That is true at the DHS level as well. Something here is strange.

Part of it again might be just that certain contracts were incorrectly classified as R&D contracts as opposed to service contracts. But that in and of itself is troubling, because all of these years you were counting these contracts as R&D contracts and thought that—and possibly expected certain output from that R&D spending that never could have materialized because it was going into something else entirely.

Mr. RICHMOND. Mr. Chairman, I yield back.

Mr. ROGERS. I thank the gentleman.

Mr. Boylan, from your time at TSA, can you give me some examples of things where they partnered effectively in this process, and some projects?

Mr. BOYLAN. I was at DHS, not TSA, Mr. Chairman.

Mr. ROGERS. I am sorry. Frankly, I am more interested in DHS as a whole than I am just one particular segment.

Mr. BOYLAN. The one I know most about is explosive detection, and with explosive detection you have something that is very important. You have requirements that are really clear, and those requirements are that you need to be able to detect a specific number of substances and you need to detect an amount at a certain level, and that drives development. The technology in that area has developed over the last 10 years tremendously, because there were targets for development by R&D within companies funded by DHS and funded by international governments as well.

Mr. ROGERS. So there was some interaction, then, before they put an RFP out in that situation?

Mr. BOYLAN. Yes. When I was first at the Department we would often have, as Mr. Pearl described, we would have people come in with the latest gadget and widget. You know, it was constant. It kind of reminded me of the Civil War days of the Federal Government at that point. I often wondered why am I sitting in this discussion, because I don't know what these people are talking about.

That was the lesson that I learned in a policy position basically, that I needed to get a little more in-depth in what the science was,

because I was making decisions that impacted this and I needed to know.

Mr. ROGERS. In your experience, we heard Mr. Ben-Ari talk about the percentage of DHS contracts to go to big companies, 40 percent; 30 percent for medium, and 30 percent for small. In your experience, do smaller companies and medium-sized companies have a greater challenge in trying to penetrate into the Department, or really not? Is it just as difficult for a big company as it is for a small one? I would open that up to any of you.

Mr. BOYLAN. I don't have data on this. But we interact with smaller companies all the time. Often companies are coming to us for support because we fall into a category of a bigger company. I hear lots of different stories and different experiences from different companies. But I do hear a constant theme of the difficulty of getting heard from smaller companies.

Mr. ROGERS. Is it because they don't understand the process or what?

Mr. BOYLAN. That is part of it. I would have to say for my company it is easier to engage, because we are providing technology and servicing it every day. So that is a different position to be in. But we do have companies developing the newest, latest, greatest widget, and it is the common theme that they have difficulty getting heard. That goes back to the industry days and the advisory groups providing that opportunity for new technology that may come from anywhere to be heard.

Mr. ROGERS. What about you, Mr. Pearl?

Mr. PEARL. We have a number of small businesses that are in the space, and over the course of the last 10 or 12 years, long before even 9/11, I was working with small businesses that were trying to in essence be heard, as Mr. Boylan is talking about. Sometimes it is part that they don't understand the process. Sometimes it is that they have a more limited R&D budget for themselves in terms of they have an idea and they want to sell it and they are trying to find out what they want to do, and the larger companies in the past have been able to invest in R&D, and that one can fail and this one can work and whatnot.

The nature of what happens sometimes is that when the technology or whatever, in the case of a widget, a product, or a service, is identified in a small business way and can get in essence some traction. Sometimes the best way to do it is for them to align themselves with some of the larger companies, and they become in essence partners because that company hasn't developed it. They either are taken over, or they become subs or whatever.

There are opportunities. The problem that my small companies are saying to us is the following: That in this environment, without a long-range strategic plan, they can't afford to waste any extra time and money in developing—even if they have a patent, even if they know what the best technology is going to be, they need to be able to get their foothold in. That goes to the international sphere as well.

One of the things that we have been having discussions about is how do you take lessons learned in places like Israel or Great Britain or Spain or Germany or India—which is not a microcosm of itself, it is a macrocosm—but how you take those lessons learned

and apply it? We have been encouraging greater communication between cut nation-states, that it is not just about the U.S. technology solution. We are going to be in a global environment.

So communication, coordination, collaboration, all of the "-ations" that I mentioned in my testimony, are exactly what we are trying to encourage not just between private sector and public sector, but between local and Federal, between the Federal Government and nation-states, between the different Federal agencies. We think that this Congress should be in the business of encouraging that kind of dialogue, that kind of communication, because we think that if you allow that, you plant a few seeds, there will be a lot of fruit borne.

Mr. ROGERS. Thank you. The gentlelady from Texas.

Ms. JACKSON LEE. Thank you, Mr. Chairman. I would like to acknowledge Mr. Richmond. I know he had an opportunity to ask questions and he was not here when I indicated that I had a markup as we speak, so I thank him for his indulgence as well.

Mr. Ben-Ari, I am going to go over something that I know has been asked. I sort of have connections into the room and I know what questions may have been raised. But I want to explore this with you because I think this is a key cornerstone to what my opening statement was.

It is about the management of R&D contract dollars by DHS. It is noted that they spent a significant amount. The Defense Department spent roughly $43.4 billion on R&D and $1.7 billion was spent on R&D management and support contracts. What does management and support actually mean, and is there a reason why DHS is spending more contract dollars on management and support of R&D than R&D?

Remember, in my opening statement I said we need to be light years, many steps, ahead of individuals with shoe bombs and underwear bombs. I am very concerned about top-heavy management if you are not in the weeds of research. So I would appreciate your commentary on that, and if you can add to the fact that most Government agencies and departments in the Federal Government rely on investment in R&D for improving their functional capabilities. DHS's functional capabilities is securing the homeland at all levels from aviation to border to intelligence gathering, if you will. But according to your report, when looking at DHS contract spending, R&D claimed less than 10 percent. Less than 10 percent.

Now, DOD is between 11 and 14 percent. I would argue that DHS needs to be higher because we are not a military, that we buy heavy equipment and we are using dollars for that, as much as we are trying to thwart terrorist acts. We are trying to be ahead of them, we are trying to be preventative. Prevention sometimes comes from human resources, but it also comes from technology.

So based on your research, is there any particular reason why DHS R&D spending, particularly last year's spending, is particularly lower than other parts of the Federal Government? If you can give us your overview on that question.

Mr. BEN-ARI. Sure. Thank you for that question. Starting with the issues of research and development management and support contracts, these are contracts that are awarded not for actual research and development activity, but in support of facilities and

equipment that are used for research and development activities. So these are contracts to support and operate laboratories, test ranges, test equipment, and so forth. The reason that distinction is important is that these dollars do not contribute directly to any specific R&D outcome.

So when measuring R&D—and I think it is important to also remember that R&D as is an input metric. You know how much you are putting in. You don't know how much you are getting out. It doesn't tell you necessarily what the outcome is of that money that you spent.

But even when you are measuring an input metric, it is important to measure correctly. If you are counting research and development managing support as research and development, you are skewing the number.

Ms. JACKSON LEE. That is my point. I thank you for the explanation. But I understood that is what it is. That is my quarrel, is why is it so high and why is my actual R&D on DHS, which would benefit from R&D, more so because we don't produce heavy armor, why is it? Why do we have this imbalance with DHS?

Mr. BEN-ARI. From what the data can tell, and I hesitate to go beyond that, but from what the data can tell, part of the reason for the high levels of spending on management and support of R&D is because certain contracts were misclassified or classified in error as management and support contracts. They were really contracts for other types of professional services. When that error was caught, the R&D management and support contracts were reclassified into the new category.

Ms. JACKSON LEE. So are you saying that DHS is investing adequately in pure R&D?

Mr. BEN-ARI. I didn't say that. I said that when what we thought we were counting as research and development dollars, specifically research and development and management and support contract dollars, we were wrong; and these contracts were actually—are now, hopefully, correctly reclassified as different types of contract.

In terms of spending levels on R&D overall, I think there is no magic number here or magic percentage: X amount of DHS dollars must be spent on research and development.

I think that comparison with DOD is a good one. I mean, it is a Department that does depend on technological advantage on the battlefield, in the same way that DHS depends on a technology advantage.

Ms. JACKSON LEE. Do you think we can improve the investment in straight R&D in DHS?

Mr. BEN-ARI. There is room for improvement if the mission calls for it. I would look at DHS' requirements today and in the future, and base research and development decisions on those requirements. If technologies exist today that meet today's requirements and requirements that we foresee for the next 5 years, then R&D spending levels are probably adequate. If, on the other hand, the expectation is, as you pointed out, for different types of threats which we are not even aware of today, then maybe the spending levels need to accommodate that to encompass a broader range of capabilities and a broader range of technology solutions to address those future threats.

Ms. JACKSON LEE. Mission is important. You do want to have your research and development connected to mission.

Let me ask Mr. Pearl and Mr. Boylan three questions, if I might, together. One is TSA is engaged in reorganization. I am not sure if it is publicly known. But do you believe it is key to attach mission to reorganization? You know, you can move the chairs around on a deck and one of them may fall overboard. So the question is: Is mission and reorganization important?

Because I think I heard you mentioning something about confusion to small businesses, and when you say that to me, small- and minority- and women-owned businesses are my passion, because I believe they are the job creators of America, and I indicated to you new starts and many others start out being small businesses.

So should reorganization be tied to mission? Would that be more helpful for the outsider to know even where to go? Is it harmful when you cut resources, such as acquisition resources, such as R&D resources, for an agency like TSA? How can we improve the informational or close the informational gap of information when it comes to procurement for small- and minority- and women-owned businesses? How can we fix that problem, which is a problem overall in Federal agencies, period? But how can we in particular fix it to an agency like DHS, which truly benefits from R&D?

Mr. Pearl, have you got the three?

Mr. PEARL. I got the three. Let me start with the third one. That was extensively discussed before, when you were gone. I am hoping you will get that, as part of that and certainly in our written testimony, that there needs to be strong, substantive dialogue and communication, coordination, collaboration, long before an RFP, that everyone can take part in in a transparent and fair way. That allows small business, large business, to be in the room, to be able to share their expertise and their capabilities. Because before you get to mission—and this goes to your first question—before you get to mission, you have to know what it is that—or in the context of that, what the capabilities are in the context of do you want just Star Wars, do you want just, you know, science fiction, or are there—is there a technological feasibility that either a small business or a large business can bring to the table? So from that standpoint, the information gap can be filled when there are these kinds of long-before-the-contract discussions.

With regard to the R&D cuts, there is no question but that it is not just TSA. What I think that all of us were talking about is not just the TSA budget when it comes to R&D; that it comes to the whole nature of research and development and looking ahead of the curve for DHS as a whole, and that we need better coordination and harmonization—dare I say standardization—so that there can be interoperability, so there can be many companies that are part of a long-range process when it comes to R&D.

It is not just R&D at DHS. I know that the folks at S&T work with DOE, work with NSA, work with DOD, work with DOJ and the FBI on a regular basis as their R&D communication. We need to encourage that, not only within Government, but in the public labs. We need to talk about it in terms of the private labs that are going on. There needs to just be better coordination and commu-

nication. I think that if you do that, all three of your questions are answered sufficiently.

Ms. JACKSON LEE. Did you answer the questions about cutting resources being harmful to the process, resources on acquisition?

Mr. PEARL. Well, the nature—it is transparent to say that the private sector is worried there is going to be a cut and therefore there isn't going to be sufficient funds for their operation. We are not talking about dollars, we are talking about dialogue. If in fact the mission is identified and capabilities are there, then whatever Congress decides is going to be appropriated to that mission, then we in the industry are going to be able to respond.

So I am not going to take a position and the organization is not going to take a position on whether there should be X amount of dollars or Y amount of dollars. We just need to have a smarter landscape, a smarter environment in Homeland Security across the board.

Ms. JACKSON LEE. Thank you.

Mr. Boylan.

Mr. BOYLAN. On the mission question, in our experience it would be useful to break down some of the silos between operations and technology, for instance. Technology at TSA is our customer. That is primarily who we operate with. But then when the technology gets deployed, operations is the one that lives with it and has requirements that may be a little different, because they are interacting with the airports and the airlines and their requirements. So the two don't necessarily always meet, in our experience.

So if there is a reorganization going on, which I have heard inklings of but no details about, I would encourage that the mission be a unified mission, and that would go a long way to, at least helping us in our mission, to help provide the technology that helps secure.

Ms. JACKSON LEE. Two quick questions, Mr. Chairman, to Mr. Ben-Ari and I will be finished.

Mr. Ben-Ari, do you think a mentorship program would be helpful to small businesses?

Mr. BEN-ARI. It couldn't hurt. I think they have been successful in the past in other agencies, in other departments, and I think there is always room for improvement.

I would just point out again this data point of 30 percent of DHS contract awards going to small companies. That is much higher than both the Small Business Administration's minimum requirements and most other Government departments. So I agree there is always room for improvement, and a mentor program is one.

Ms. JACKSON LEE. Is it important to have the adequate resources for R&D, adequate financial resources for R&D?

Mr. BEN-ARI. I think research and development, funding research and development to meet future requirements is very important. But those requirements have to be established, ideally, together with industry—that is part of the dialogue that I think was referred to earlier—and with the end-user. The people in the field undertaking the operation need to be part of this discussion as well.

Ms. JACKSON LEE. But they can't be part of the discussions. The question is: Does the United States need to invest adequate re-

sources for R&D from the Government perspective to protect the homeland? Is that an important investment?

Mr. BEN-ARI. It is an important investment.

Ms. JACKSON LEE. And not worthy of being looked at lightly or being subject to random cuts?

Mr. BEN-ARI. Absolutely. We are putting future capabilities at risk if we do not have this process in place to look at future requirements and fund the capabilities to meet those requirements adequately today.

Ms. JACKSON LEE. Mr. Chairman, I thank you for your indulgence. Thank you to the witnesses as well.

Mr. ROGERS. I thank the gentlelady.

I just wanted to ask one more thing. Currently TSA is engaged in a pilot program to allow third-party explosive detection canine teams to be certified by TSA. If implemented, TSA would then be leveraging the private sector to provide the service that until now has been the purview of the Federal teams.

Are there other areas in which the private sector could be certified to provide services, that right now are only being handled by Federal employees, that you would like to see? Are you aware of any? Mr. Pearl, you mentioned certification in your opening statement, and that is one of the reasons I asked that.

Mr. PEARL. There is no question, and it goes to the R&D question as well. The certification and designation—both Mr. Boylan and I were testifying earlier in the summer before the committee on the SAFETY Act, the law that already exists that allows DHS to give certification and designation to technologies that are antiterrorist technologies. That hasn't been fully marketed and fully publicized. That nature of how the Government can in essence give a sense of recognition to technologies that provide that is one way.

I would not limit the whole R&D argument to just the Federal Government's role. I think the public labs, the academia, and in the private sector has R&D investment that they are ready to do as well.

So the nature of the industry, the third party in terms of designation and standardization, is something that we are definitely interested in and the specifics we can look at more—we can get back to you on other ways that have worked in the past.

Mr. ROGERS. Well, I am definitely going to follow up on your recommendations earlier about making sure we include in our authorization bill next month language to encourage the Department to have these early—early conversations with the private sector in some sort of a format that is practical.

But one thing that I am thinking about, I am about to start a Transportation Security Caucus here in the Congress. We have a lot of members not on the Homeland Security Committee that are interested in this topic. So to facilitate communication with them, I am going to be starting that.

Is there a way that you think such a caucus of Members could bring about more of this dialogue, or really does it have to just come through the Department with the private sector?

Mr. BOYLAN. I think that Members all have constituent airports and other transportation constituents who really would like to have

their voices heard, in my experience, and I think that would be a valuable input for all of us, technology and Government.

Mr. ROGERS. Okay. Do you have more questions?

Ms. JACKSON LEE. If the gentleman would yield, I would hope that as well, we might add a very strong component on small and MWBEs. Even though I hear the 30 percent, I think there are new companies that don't know the system, way beyond the Beltway, that I would like to see having an opportunity to work for the Federal Government. Let's get them from Utah and Alabama, Mississippi, Michigan, Illinois. I know that there may be some. But that is where the gap of information is.

If you are not buzzing around the area, which is the crowd that understands Federal contracting, you are not going to get too many beyond the Beltway who understand this process. I think they may have very worthy ideas, and I would like to make sure they get the opportunity to present their ideas to help the American people and secure the homeland.

Thank you. I yield back.

Mr. ROGERS. I thank the gentlelady. I thank the witnesses. You have been very helpful. I would ask that there may be some written questions from Members who couldn't make it that they would want to submit to you, and I would ask you to respond to those within 10 days. After that we will close it out.

With that, this committee is adjourned.

[Whereupon, at 3:31 p.m., the subcommittee was adjourned.]

TSA REFORM: EXPLORING INNOVATIONS IN TECHNOLOGY PROCUREMENT TO STIMULATE JOB GROWTH, PART III

Thursday, November 3, 2011

U.S. HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TRANSPORTATION SECURITY,
COMMITTEE ON HOMELAND SECURITY,
Washington, DC.

The subcommittee met, pursuant to call, at 2:02 p.m., in Room 311, Cannon House Office Building, Hon. Mike Rogers [Chairman of the subcommittee] presiding.

Present: Representatives Rogers, Cravaack, Turner, Jackson Lee, and Davis.

Mr. ROGERS. The Committee on Homeland Security, Subcommittee on Transportation Security will come to order.

The subcommittee is meeting today to continue to examine innovative solutions to technology procurement at TSA that could generate cost savings for the Federal Government and stimulate job growth in the private sector.

I want to thank all of our witnesses for being here to participate in what I believe is going to be a very fruitful and timely hearing. I am pleased to see the spectrum of offices that are participating in aviation technology, development, and procurement that are represented at the table.

Leading up to this hearing we have had testimony from former DHS officials, the GAO, and industry representatives on how we can optimize the relationship between TSA and the private sector. They all expressed both success stories and challenges that TSA faces in finding the best ways to achieve this collaboration that is so important to developing the right technologies for risk-based screening.

We now invite DHS, TSA, and the Science and Technology Directorate and the DHS Office of Inspector General to speak on what they perceive to be successes, challenges, and needed changes to foster innovation and meet our security needs as effectively as possible.

One of TSA's stated aviation security goals is to develop enhanced technologies and capabilities to enable risk-based and intelligence-driven screening processes. I want to emphasize how important this goal is and what an opportunity it represents for providing both security and jobs. The question is: How can we work together to ensure that TSA is getting the technologies it needs to

secure the traveling public and commerce, while promoting innovation and, therefore, job growth in the private sector?

I know that Dr. Nayak in his capacity as Chief Procurement Officer has stated that one of his strategic objectives is to establish quality communication between industry and DHS. I look forward to hearing from him on how the initiatives within his offices are making that happen.

I would also like to hear how acquisitions are being standardized across the Department so that vendors working with multiple components can do so with a level of predictability that they say is currently lacking.

From Mr. Kane and Mr. Benda, I trust you will address the joint strategy you have undertaken to ensure that you have a workable plan for aviation technology investment. I know the existing plan looks out 2 years ahead, but I would love to see this extended further, say to 4 or 5 years, because I believe this is what industry needs to help achieve the mission successfully. I also think that TSA has the opportunity to be more of a leader in setting international standards for screening technology which would increase the market space for many U.S. companies.

Finally, I look forward to Mr. Edwards' finding from the Inspector General's Office, which has produced some very useful reports on how acquisition of detection equipment can be consolidated across the Department. We know from our prior hearings that more use of strategic sources, better industry days, reestablishment of the Joint Requirements Council, and transparency with industry on the 5-year outlook are some of the key areas we must strengthen.

I look forward to hearing the perspective of all the witnesses on these and other matters where we can work together to find solutions. Industry has ideas, and I want to ensure that TSA and DHS are listening to them. Then I want to turn those ideas into solutions.

We have posed the question: What are the available options for adjusting how things are done at TSA that will foster more innovative capacity in the technology sector? Now we need to establish answers and implement the needed changes.

We have an obligation to examine the ways to solve some of our Nation's most pressing challenges, of which high unemployment tops the list right now. We must leave no stone unturned in finding ways to reverse that trend and support all sectors of the economy, including technology innovation, which has long been one of America's greatest strengths.

With that, I typically would yield right now to Ms. Jackson Lee, but, as I told the panelists a minute ago, she is in Judiciary with an amendment of her own and can't leave, so we are going to pass that and go straight to the witnesses for their testimony.

Nick Nayak is the Chief Procurement Officer at the Department of Homeland Security. Prior to coming to DHS, Mr. Nayak served as Deputy Director for Internal Revenue Service Procurement. Before rising to Deputy Director for IRS Procurement, Mr. Nayak served in several high-impact leadership positions, including Director of Strategic Acquisition Initiatives, Deputy Director of the Office of Information Technology Acquisition, Assistant to the Direc-

tor of Information Technology Program Management, Project Executive for the IRS Commissioner's Readiness Project, and Director of the Treasury Acquisition Institute.

Robin Kane became Assistant Administrator for Security Technology at TSA in June 2009 after serving in an acting role since December 2008. As Assistant Administrator, Mr. Kane oversees the implementation and development of security technologies across multiple modes of transportation. He is responsible for development, test and evaluation, acquisition and deployment, and the maintenance of all TSA security technologies and systems. Mr. Kane joined TSA in 2005 as a branch chief within TSA's Office of Budget and Performance. Prior to TSA, Mr. Kane spent 20 years in the Coast Guard.

Paul Benda joined the Department of Homeland Security Science and Technology Directorate in January 2010. He serves as the Under Secretary's Chief of Staff and Director of the Homeland Security Advanced Research Projects Agency.

Can't you find anything else to do? You don't have much on your plate.

Prior to joining DHS, Mr. Benda was Director of the Project Integration Office at the Department of Defense where he oversaw the design, implementation, testing, and commissioning of all security systems in the Pentagon reservation. Earlier, Mr. Benda served as the Pentagon's Chemical, Biological, Radiological, Nuclear, and Explosives Director; and in civilian service he was a program manager at DOD's Defense Advanced Research Projects Agency.

Accompanying Mr. Benda in the audience today is Dr. Susan Hallowell, Director of the Transportation Security Laboratory. The TSL is a Federal laboratory of the DHS Science and Technology Directorate that is dedicated to finding and testing solutions to detect and deter weapons and explosive threats to transportation. Prior to being named as Director, Dr. Hallowell managed and executed research and development for explosives detection for DHS under TSA.

Dr. Hallowell has worked for DHS and the Federal Aviation Administration for 20 years in the areas of explosive detection, research, and development and is an expert in the area of trace detection of explosives. Prior to working for the FAA, she worked as a research chemist for the U.S. Army in the area of detection and protection against chemical warfare agents.

On behalf of the committee, I would like to thank Dr. Hallowell for her decades of service and her efforts at Transportation Security Laboratory that are vital to the security of transportation systems around the country.

Charles Edwards assumed the position of Acting Inspector General for the Department of Homeland Security in February 2011, where he previously served as Deputy Inspector General for the Department. Mr. Edwards has over 20 years' experience in the Federal Government, where he has held leadership positions at the Transportation Security Administration, the United States Postal Service, and the USPS Office of Inspector General.

We have got a great panel here, and this is an area I care very much about. We can make some great changes. I hope that the witnesses here have had a chance to look at what came from our pre-

vious two hearings with Michael Jackson and Elaine Duke from their perspective in the rearview mirror and then the industry panel we had. I know they are all anxious to hear what you have to say.

We will start with Dr. Nayak. You are recognized for 5 minutes to summarize your opening statement.

STATEMENT OF NICK NAYAK, CHIEF PROCUREMENT OFFICER, U.S. DEPARTMENT OF HOMELAND SECURITY

Mr. NAYAK. Thank you, Mr. Chairman.

Chairman Rogers, Ranking Member Jackson Lee, and Members of the subcommittee, I am pleased to testify before you today.

As DHS Chief Procurement Officer, I am responsible for oversight and policy related to DHS' annual procurement of approximately $14 billion in goods and service. My background includes growing up in family-operated small businesses, working in the private sector for small and large businesses bidding on defense contracts, and more than 20 years of public service dedicated to building the Federal acquisition workforce and driving procurement initiatives to save taxpayer dollars.

Since arriving at DHS a little more than a year ago, I established four priorities that I am using to improve DHS procurement: Quality contracting, quality people, quality program support, and the one priority that I added beyond my predecessors, quality interaction with industry and Government communication. Supporting each of my priorities are a number of initiatives that move DHS procurement forward in getting good deals for the taxpayer.

In the area of quality contracting, DHS has achieved substantial success in spending money more efficiently through our Strategic Sourcing Program. The Department leads the Federal Government in coordinated procurements and has been recognized by the Office of Management and Budget, the General Services Administration, and the Partnership for Public Service because of our results. In fiscal year 2010, DHS saved over $347 million using strategically sourced contracts.

In addition to savings, the Strategic Sourcing Program also focuses on maximizing the Department's use of small businesses and small disadvantaged business. Small business received approximately 36 percent of the total dollars that were strategically sourced in fiscal year 2010, far exceeding the Government-wide goal of 23 percent. We intend to expand the use of this valuable procurement tool in fiscal year 2012.

In the area of quality communication with industry, I recently issued a Department-wide vendor communication plan. This publicly posted plan begins with a personal commitment from each head of contracting activity to enhance component engagement for all procurements. Requirements of the plan will result in an increased number of RFIs, draft RFBs, new and improved industry days related to specific procurements, a revamped on-line procurement forecast system supported by component procurement liaisons to answer inquiries from all in industry, a new and improved annual DHS industry day, and attendance at over 100 small business outreach events, including 10 small business vendor outreach sessions that include one-on-one appointments.

In addition to my plan, we are investigating the possibility of a transparent industry advisory council and dialogue forum separate and apart from individual procurements. It must be open to all. We are contemplating reversing industry days, where industry comes in and they are invited to discuss their capabilities with us. I believe, given time for this plan to take hold, we are going to be a leader in communication with industry.

In the areas of quality people and program support, the Department is committed to recruiting, developing, and retaining a world-class acquisition workforce. Through aggressive recruitment and retention strategies, the DHS contracting workforce has increased from 603 in fiscal year 2004 to more than 1,400 professionals who processed over 90,000 contracting actions and obligated $14 billion in fiscal year 2010 and in 2011.

However, the Department's rate of hiring contracting and programming support professionals has historically lagged well behind our needs. Our primary mechanism to correct this problem is our Acquisition Professional Career Program. This is a 3-year program that provides participants with acquisition training experience through intensive training and on-the-job experience.

Further, DHS has made significant progress in approving its existing workforce through training and certification for multiple acquisition career fields. A well-trained acquisition workforce can engage industry and apply flexible procurement strategies because they know more and they have better experience. Most importantly, a better workforce yields real savings to the taxpayer by a getting better business deal.

DHS is committed to continuing to improve the acquisition process by enhancing our workforce, by partnering with industry, and incorporating best practices such as strategic sourcing. This approach supports the Department's frontline operations while ensuring effective oversight and efficient use of taxpayer resources.

Thank you for the opportunity to participate today. I look forward to questions.

[The statement of Mr. Nayak follows:]

PREPARED STATEMENT OF NICK NAYAK

NOVEMBER 3, 2011

Chairman Rogers, Ranking Member Jackson Lee and Members of the subcommittee, I am pleased to testify before you today. As the Chief Procurement Officer since October 2010 at the Department of Homeland Security (DHS), I am responsible for oversight and policy related to DHS's annual procurement of approximately $14 billion in goods and services. DHS continues to improve its purchases across the Department first and foremost through the Strategic Sourcing Program. We are also expanding communication with large and small businesses to ensure we procure the right items at the right prices. The DHS acquisition workforce uses these tools to spend taxpayer resources efficiently and effectively. Today, I am happy to provide you an update on our continued success with strategic sourcing, our expansion of vendor communication and the status of our acquisition workforce.

QUALITY CONTRACTING—STRATEGIC SOURCING

DHS has achieved substantial success in spending money more efficiently through our Strategic Sourcing Program. The Department leads the Federal Government in coordinated procurements and has been recognized by the Office of Management and Budget, the General Services Administration, and the Partnership for Public Service because of our results. In fiscal year 2010, DHS saved over $347 million

using strategic sourcing contracts. These savings come from initiatives that span across eight commodity families including:

- Industrial Products & Services
- Information Technology & Telecommunications
- Professional & Office Area Support Services
- Security
- Facilities & Construction
- Office Management & Miscellaneous Products
- Travel & Lodging
- Logistics Operations & Package Delivery Services

The Department realized these significant savings by choosing the Strategic Sourcing Program for approximately $2.6 billion of its requirements. This savings represents approximately 18 percent of the $14 billion spent on contracts at the Department in fiscal year 2010.

In addition to savings, the Strategic Sourcing Program also focuses on maximizing the Department's use of small and socio-economic disadvantaged companies. Small businesses received approximately 36 percent of the total contract dollars that were strategically sourced in fiscal year 2010, far exceeding the Government-wide small business overall contracting goal of 23 percent. In fiscal year 2011, DHS awarded 13 new strategic sourcing initiatives. We look forward to continuing to expand this valuable procurement tool in fiscal year 2012.

The Strategic Sourcing Program has achieved success, in part, by facilitating collaboration between industry and Government. The Program undertakes comprehensive market research and examines buying trends across the Department. Based on industry standards and knowledge of the marketplace, DHS refines the requirement and creates the procurement strategy. When we have used this collaboration as part of the Strategic Sourcing Program, DHS has achieved robust competitions and significant cost savings.

DHS's Wireless Devices procurement is one example of the Strategic Sourcing Program listening to industry and responding accordingly. In this case, we learned that the telecommunications carriers did not have the existing capability to provide the program with management reports. The procurement team decided to eliminate the reporting requirements from the carrier agreements and developed a separate procurement for the enterprise-wide reporting services. This modification allowed the telecommunication carriers to reduce the prices on the devices which DHS believes will result in a net savings that can be reported when the purchase is complete.

Another example of collaboration that resulted in strategic sourcing savings was the purchase of enterprise software licenses. This procurement was one of several initiatives implemented as part of Secretary Napolitano's Efficiency Review to leverage the purchasing power of the entire Department. Multiple commercial and Government sources for software licenses were evaluated, allowing the Government to develop a strategy for purchasing an Enterprise Licenses Agreement (ELA) that resulted in $40 million in savings during fiscal year 2010 due to lower prices and streamlined the procurement process.

QUALITY INDUSTRY-GOVERNMENT COMMUNICATIONS

The Department is committed to promoting enhanced vendor engagement in the acquisition process. Building on the success of the Strategic Sourcing Program, I have included vendor communications as a cornerstone of my Strategic Plan. My publicly posted Vendor Communication Plan begins with a personal commitment from each Head of the Contracting Activity (HCA) to enhance Component engagement with industry, allowing industry to see how DHS will work to improve dialogue. The signed pledges have already resulted in increased communication with industry prior to and during source selection.

In addition to holding executives accountable for increased communication, the Department also includes many other features in its Plan to strengthen vendor communication. For example, my office hosts a DHS Industry Day every year. Last year's event was attended by approximately 1,000 industry representatives and 2,000 participants via webcast. The event includes panels from each Component moderated by the appropriate HCA that provide program- and acquisition-specific information on the Components' planned major acquisitions. The Industry Day also facilitates discussion among companies and connects industry with the responsible Government representatives.

Additionally, the Department conducts or attends over 100 small business outreach events each year. Vendor Outreach Sessions, conducted ten times a year by the Department's Office of Small and Disadvantaged Business Utilization (OSDBU),

provide small businesses pre-scheduled one-on-one appointments with a DHS small business specialist. These sessions provide small businesses with an opportunity to discuss their capabilities and learn of potential procurement opportunities. Notices of upcoming Vendor Outreach Sessions are posted to the Small Business Central Event Listing on FedBizOpps, as well as on the DHS public website to maximize participation. These efforts have contributed to the awarding of approximately 30 percent of all DHS contracts to small businesses from 2007 through 2011, and outpacing all other large Federal agencies in achieving all of the Federal small business goals each year. These small businesses are making a significant contribution to DHS's mission.

As an example, in fiscal year 2011 DHS awarded a $2 million contract to Astrophysics, Inc., a small business located in California, for a new technology or technological ideas for screening air cargo assembled into pallets, sometimes called "skids". Currently, in certain circumstances, pallets must be broken down before screening, which costs more and takes more time. Astrophysics Inc. is creating a system that will increase efficiency by scanning a full complement of medium- and high-density air cargo across a wide range of commodities (e.g., apparel, produce, seafood/meats, flowers, electronics, machine parts, printed material, and miscellaneous durable goods). Once operational, the system will reduce TSA's costs, reduce the time for screening, and enhance the security of air cargo. DHS values the contributions of its small business partners and recognizes that they are essential to accomplishing our mission.

Finally, to assist large and small vendors, DHS publishes an acquisition forecast available on DHS's website through the new Acquisition Planning Forecast System. This new forecasting tool was implemented in response to industry, and will respond to industry concerns and provide an effective mechanism for industry to connect directly with those who may be interested in their technology.

QUALITY PEOPLE

Effective industry engagement and good procurements require a trained and fully-staffed acquisition workforce. Through aggressive recruitment and retention strategies, DHS's contracting workforce has increased from 603 in fiscal year 2004 to more than 1,400 professionals who processed over 90,000 transactions, and obligated $14 billion in fiscal year 2010. However, the Department's rate of hiring contracting professionals has historically lagged well behind the Department's needs. Our primary mechanism to correct this problem is our Acquisition Professional Career Program (APCP). This 3-year program provides participants with acquisition training and experience through intensive training and on-the-job experience. DHS's future procurement improvements depend on continuing to grow its acquisition workforce through the APCP.

Further, DHS has made significant progress in improving its existing workforce through training and certification for multiple acquisition career fields. All DHS contracting professionals receive appropriate training and experience commensurate with their responsibilities and certification requirements. As reported in our March 2011 update to our acquisition human capital plan, we continue to increase the training and experience of our program managers so they have the tools they need to successfully manage their assigned procurements.

Our commitment to an improved professional workforce leads to an acquisition process that is more effective and efficient. A well-trained acquisition workforce can engage industry and apply flexible procurement strategies because they know more and have better experience. Most importantly, a better workforce yields real savings to the taxpayer by getting a better business deal. In order to continue to expand communication with industry and deepen our procurement capability, DHS must continue to invest in our acquisition workforce. Our APCP program will continue to provide new energetic talent throughout DHS's Components. Our centralized training of all acquisition fields must be maintained so that all involved in the procurement process have the knowledge and tools they need to effectively engage industry and ensure DHS buys what it needs at a reasonable price.

CONCLUSION

DHS is committed to continuing to improve our acquisition process by enhancing its acquisition workforce and by partnering with industry and incorporating best practices from across the Department to efficiently procure common goods and services through the Strategic Sourcing Program. This approach supports the Department's front-line operations while ensuring effective oversight and efficient use of taxpayer resources.

Thank you for the opportunity to participate in your discussions regarding the specific DHS procurement practices. I look forward to your questions.

Mr. ROGERS. Mr. Kane.

STATEMENT OF ROBIN E. KANE, ASSISTANT ADMINISTRATOR, SECURITY TECHNOLOGY, TRANSPORTATION SECURITY ADMINISTRATION

Mr. KANE. Good afternoon, Chairman Rogers, Ranking Member Jackson Lee, and distinguished Members of the subcommittee. Thank you for the opportunity to testify today regarding the ways we are advancing security through innovation of new and improving technologies.

TSA procures and deploys the detection equipment used to screen over 1.5 million passengers a day in the Nation's airports, as well as their carry-on and checked baggage. In addition, we test and approve technologies for use in screening air cargo and in other transportation modes.

We work closely with the DHS Science and Technology Directorate as well as the private sector, including National labs, Federally-funded research and development corporations, and universities. A specific result of our collaboration was the joint development and publishing of the aviation security technology research and development strategy in March 2011. It contained an R&D roadmap to keep our efforts closely aligned.

Since early 2010, TSA has also had a broad agency announcement soliciting input on transportation security innovative concepts. The BAA solicits proposals for research projects which offer potential for advancement and improvement of TSA security operations, technologies, processes, human factors, and capabilities. To date, TSA has received over 100 proposals and made four awards under the BAA. Those discussions and engagements facilitate developing the requirements to address evolving threats to aviation and structure TSA's acquisition programs.

TSA continues to advance security by investing in innovative technologies, improving efficiencies, and pursuing equipment standardization initiatives. Examples include advanced imaging technology, or AIT, which helps transportation security officers screen passengers for metallic and non-metallic explosives as well as other anomalies. TSA is currently upgrading many of these machines with automated target recognition software, providing the same high level of detection, while enhancing privacy protection by replacing passenger-specific images with a generic outline of a person that is identical for all passengers.

Early next year, TSA will field test an identification and boarding pass scanning system which quickly screens passengers for fraudulent IDs and boarding passes. If proven successful, this technology could replace the current "lights and loupes" manual method of authentication.

TSA is also upgrading current X-ray systems, deploying next-generation systems to screen carry-on luggage at the security checkpoint. Next-generation units feature enhanced explosive detection capabilities that detect a wider range of threats.

Bottled liquid scanner systems are used to detect potential liquid or gel threats, while differentiating between liquid explosives and

common, benign liquids, such as baby formula or insulin. Next-generation systems detect a wider range of explosive materials and use light waves to screen sealed containers for explosive liquids. These units have been deployed to 230 airports.

Over the next 5 years, a large number of TSA's explosive detection systems will reach the end of their useful life and replacing these aging units is a top priority. TSA intends to recapitalize them with more capable machines with greater detection capability through an on-going procurement.

TSA is also using technology in innovative configurations. This past October we began testing TSA PreCheck, a voluntary passenger pre-screening initiative with an actual known traveler population at four U.S. airports, placing more focus on pre-screening individuals who volunteer information about themselves prior to flying. Because we know more about these passengers, TSA PreCheck travelers may divest fewer items, which could include leaving on their shoes and jacket.

Of course, TSA will continue to incorporate random and unpredictable security measures throughout the security process. At no point is any traveler guaranteed expedited screening.

Initial feedback from TSA PreCheck passengers has been favorable. TSOs are receiving very positive comments and the two partner airlines have successfully demonstrated the required technical capabilities.

All of these efforts benefit from partnerships within DHS and with industry. TSA will continue to strengthen those relationships and processes to deliver the best technology and capabilities to provide effective security.

Chairman Rogers, Ranking Member Jackson Lee, I thank you for the opportunity to appear today, and I look forward to answering your questions.

[The joint prepared statement of Mr. Kane and Mr. Benda follows:]

JOINT PREPARED STATEMENT OF ROBIN E. KANE AND PAUL BENDA

NOVEMBER 3, 2011

Good afternoon, Chairman Rogers, Ranking Member Jackson Lee, and distinguished Members of the subcommittee. Thank you for the opportunity to testify today about the Transportation Security Administration's (TSA) use of technology that supports our layered approach to securing the Nation's transportation systems while ensuring freedom of movement for people and commerce. To accomplish this mission, we employ risk-based, intelligence-driven operations to prevent terrorist attacks and reduce the vulnerability of the Nation's transportation system. While no layer on its own addresses all risk, in combination they create a strong and formidable system.

Last fall, TSA Administrator John S. Pistole directed the agency to explore ways to develop a strategy for achieving risk-based security. I am pleased to have an opportunity today to discuss with the subcommittee the processes employed by TSA to advance innovation through new technologies that strengthen our multi-layered security system.

CREATING INNOVATIVE SOLUTIONS BY PARTNERING WITH INDUSTRY

TSA has forged a number of partnerships to develop and deliver solutions to combat emerging and evolving threats to transportation security. Specifically, TSA works with the DHS Science and Technology Directorate (S&T) to create innovative solutions to threats and challenges. TSA also collaborates with the private sector including National labs, Federally-funded research and development corporations

(FFRDCs), universities, and other qualified vendors at industry days, technical forums, conferences, and program reviews.

COLLABORATIVE APPROACHES TO TECHNOLOGY INNOVATION

TSA is also working closely with trade associations that focus on homeland security issues to share its vision with industry stakeholders. Since early 2010, TSA has issued an annual Broad Agency Announcement (BAA) to collect innovative concepts from industry to inform future decisions for research and development (R&D) efforts and to identify innovation already available in the marketplace. In the last year, TSA pursued several submissions for proof-of-concept demonstrations focused on insider threat analysis, behavior detection, and explosive detection, and is currently reviewing numerous other proposals.

ADVANCING AVIATION SECURITY WITH TECHNOLOGY INVESTMENTS

To address the evolving threats to aviation, TSA continues to advance security by investing in innovative technologies, improving workforce efficiencies, and pursuing initiatives to further standardize and integrate equipment. Such advancements and initiatives include:

Advanced Imaging Technology and Automated Target Recognition

Advanced Imaging Technology (AIT) helps Transportation Security Officers (TSOs) screen passengers for metallic and non-metallic explosives as well as other non-metallic threats. Currently, there are more than 500 AIT units at nearly 100 airports. Two months ago, TSA purchased an additional 300 machines, which are being deployed with Automated Target Recognition (ATR) software. ATR software upgrades are designed to further enhance passenger privacy by eliminating passenger-specific images and instead displaying a generic outline of a person that is identical for all passengers. By removing the need for an officer to view images in a remote location, the use of the software also improves throughput capabilities of the technology and streamlines the checkpoint screening process. The ATR software provides the same high level of detection as AIT without the software and it allows for more targeted pat-downs because of the manner in which anomalies are displayed. The President's fiscal 2012 budget requests funding for an additional 275 AIT units. The availability of this equipment supports long-term needs while increasing efficiencies at checkpoints with even more effective ATR software and a reduced footprint, which will inform future deployment strategies.

Credential Authentication Technology/Boarding Pass Scanning Systems

The Credential Authentication Technology/Boarding Pass Scanning Systems (CAT/BPSS) provide TSOs with an effective tool to quickly detect fraudulent or altered documents, enhancing security and increasing efficiency. This equipment automatically and concurrently verifies passenger boarding passes and IDs that passengers present to TSA during the security checkpoint screening process, as well as those IDs presented by airport and airline personnel to access sterile areas.

We plan to conduct CAT/BPSS technology pilots in the coming months and throughput will be evaluated very closely as we determine the overall operational suitability of the various solutions. If testing proves successful, the technology could replace the current manual "lights and loupes" method of ID and boarding pass authentication.

Automated Wait Time

Automated Wait Time (AWT) systems utilize technology to monitor and track queuing traffic at the security checkpoint, enabling TSA to reallocate resources to areas of higher congestion and priority as needed. TSA preliminarily tested an AWT system at the TSA Systems Integration Facility (TSIF) and anticipates testing it in airports in the coming months.

Next Generation Advanced Technology X-Ray

TSA is in the process of upgrading currently deployed AT X-ray systems, as well as deploying next generation, or AT–2 systems. This technology is used to screen carry-on luggage at the security checkpoint. In addition to other upgrades that streamline the bag check process, next generation AT X-ray units feature enhanced explosive detection capabilities that enable TSA to detect new threats.

There are currently more than 1,000 AT units at nearly 100 airports. These systems enhance security effectiveness and efficiency, and deployments will continue into calendar year 2012. We are working closely with DHS S&T and our qualified vendors to assess the AT–2 system's capability to detect liquids, aerosols, and gels (LAG), which would help to expedite the secondary bag search process.

Bottled Liquids Scanners

Bottled Liquids Scanner (BLS) screening systems are used to detect potential liquid or gel threats which may be contained in a passenger's property while differentiating between liquid explosives and common, benign liquid such as baby formula and insulin. Next-generation bottled liquids scanner screening systems have the ability to detect a wider range of explosive materials and use light waves to screen sealed containers for explosive liquids. TSA recently deployed 500 next-generation BLS units to airports Nation-wide to add to the more than 1,000 BLS units currently deployed at 230 airports.

Shoe-Scanning Detection Technology

Shoe-Scanning Detection (SSD) technology is an advanced technology which would be capable of detecting both metallic and non-metallic threats concealed in passenger footwear without requiring passengers to remove their footwear at the checkpoint. DHS S&T recently issued a Broad Agency Announcement that supports R&D efforts to develop shoe-scanner detection systems that meet TSA detection requirements.

Explosives Trace Detection

Explosives Trace Detection (ETD) technology is used at security checkpoints around the country to screen carry-on baggage and passengers for traces of explosives. Officers may swab a piece of luggage or passenger hands and then use ETD technology to test for explosives. The swab is then placed inside the ETD unit, which analyzes the content for the presence of potential explosive residue. TSA is expanding its use of ETD technology in airports as part of its layered approach to aviation security.

Explosives Detection Systems Recapitalization and Optimization

Over the next 5 years, a large number of Explosives Detection Systems (EDS) will reach the end of their useful life and replacing these aging units is a top priority. TSA will fund recapitalization projects, which include the work required to remove the existing EDS, minimal modifications to the Baggage Handling System infrastructure, and the associated purchase and installation of the new EDS. TSA's plan to replace the aging EDS fleet of equipment will be prioritized based on a combination of age and maintenance data.

RISK-BASED SECURITY

In the past, Administrator Pistole has spoken to this subcommittee about TSA's risk-based approach to enhancing security. I would like to provide you with the current status of two of our new risk-based programs that are supported by technological advancements:

TSAPre✔™

This past October, TSA began testing a limited and voluntary passenger pre-screening initiative with a small known traveler population at four U.S. airports (Miami, Dallas-Ft. Worth, Detroit, and Atlanta). This pilot program will help assess measures designed to enhance security, by placing more focus on pre-screening individuals who volunteer information about themselves prior to flying in order to potentially expedite the travel experience. By learning more about travelers through information they voluntarily provide, and combining that information with our multi-layered system of aviation security, we can better focus our limited resources on higher-risk and unknown passengers. This new screening system holds great potential to strengthen security while significantly enhancing the travel experience, whenever possible, for passengers.

During this pilot, TSA is using pre-screening capabilities to make intelligence-based risk assessments for passengers who voluntarily participate in the TSAPre✔™ program and are flying domestically from one of the four airport pilot sites. Eligible participants include certain frequent flyers from American Airlines and Delta Air Lines as well as existing members of U.S. Customs and Border Protection's (CBP) Trusted Traveler programs including Global Entry, SENTRI, and NEXUS who are U.S. citizens and are flying on participating airlines. The data collected from these pilot sites will inform our plans to expand the program to include additional airlines as well as other airports that participate in CBP's Global Entry program, once they are operationally ready.

TSAPre✔™ passengers are pre-screened each time they fly from participating airports. If the indicator embedded in their boarding pass reflects eligibility for expedited screening, the passenger is able to use the TSAPre✔™ lane. Because we know more about these passengers, TSAPre✔™ travelers are able to divest fewer items,

which may include leaving on their shoes, jacket, and light outerwear, as well as other modifications to the standard screening process. As always, TSA will continue to incorporate random and unpredictable security measures throughout the security process. At no point are TSAPre✔™ travelers guaranteed expedited screening.

Transportation Security Officers (TSOs) in the four pilot airports are receiving very positive feedback from TSAPre✔™ travelers while the two partner airlines have successfully demonstrated the technical capabilities required to participate in the program, thus paving the way for other airlines to follow. As we learn from these pilots, we are working closely with other airlines and airports to determine when they may be operationally ready to join. We are also working with CBP to ensure that individuals who want to apply for Trusted Traveler Programs are able to do so in an efficient manner.

Known Crewmember

We hold airline pilots responsible for the safety of the traveling public every time they fly an aircraft. It makes sense to treat them as our trusted partners. To build on our risk-based approach to security, we are currently testing another identity-based system to enable TSA security officers to positively verify the identity and employment status of airline pilots. The Known Crewmember program is a joint initiative between the airline industry (Air Transport Association) and pilots (Air Line Pilots Association, International (ALPA)), which allows uniformed pilots from 22 airlines to show two forms of identification that are checked against a database called the "Cockpit Access Security System (CASS)," which confirms identity. After more than 2 months into the pilot program, and with deployments nearly complete at the seven participating airports, over 59,000 uniformed pilots have been cleared through the process with an average of nearly 1,900 approvals per day. Both Known Crewmember and TSAPre✔™ are clear examples of TSA's commitment to focusing its attention and resources on those who present the greatest risk, thereby improving security and the travel experience for passengers across the country.

CONCLUSION

TSA will continue to enhance its layered security approach through state-of-the-art technologies, expanded use of existing and proven technology, passenger pre-screening, and other developments that will continue to strengthen aviation security. Chairman Rogers, Ranking Member Jackson Lee, I thank you for the opportunity to appear before you today, and I look forward to answering your questions about the use of innovative technology to provide additional layers of security to our Nation's transportation systems.

Mr. ROGERS. I thank you.

As a fellow who got to go through the PreCheck system this past week for the first time, that lane was wonderful. I got to keep my shoes on and my belt and everything. All I had to do was take my keys and phone out. That is a great initiative. I am hopeful that we can see that soon expanded after the first of the year everywhere, because a lot of people are going to like it.

Now I would like to recognize the Ranking Member, my friend and colleague from Texas, for her opening statement.

Ms. JACKSON LEE. Mr. Chairman, first of all, let me thank you for your courtesies and thank the witnesses.

I notice, I assume, Mr. Chairman, you have indicated that there is a vote on the floor, and let me acknowledge the fact that in overlapping committees, I think there is some law enforcement officers even in the room, I know that Ms. Bell and Mr. Daniels are guests that are here in the room, one with Ultimate Lock, one a law enforcement officer. We were dealing with synthetic drugs, Mr. Chairman, in Judiciary in a markup. I was in the middle of a markup. I deeply appreciate your courtesies.

Other Members, let me give comfort and defense to other Members. There are overlapping hearings. But this is a very important series of hearings, and I want to thank the witnesses, but I want to thank the Chairman. I think we have gained a lot of knowledge,

that hopefully we will even come with an omnibus bill dealing with technology, small businesses, how we can improve our security.

Mr. Chairman, you won't mind if I do one slight tongue-in-cheek moment on technology that will include blinders on TSA inspectors for suitcases. We don't want to tempt anyone for what they might see in suitcases.

Mr. Chairman, I guess you have missed the news, but I have expressed my great consternation in that, and I hope that Mr. Nayak is listening to me when I say that you should stick to the work that you are supposed to be doing when you are inspecting suitcases.

But let me quickly, because—they will get that after the fact, Mr. Chairman—I want an omnibus bill on that. Will you join me in cosponsoring legislation?

As we have discussed in the past, securing our Nation requires not only vigilance and resources but also innovation and imagination. As I indicated, this is a very important series of hearings that we have explored in focusing on TSA reform but also to generate guidance on how we move forward in the 21st Century.

New technology, helping small businesses, creating the opportunity, if you will, for small businesses to show their wares to secure the homeland. That is what I want to be the resounding part of this series of hearings. How do we ensure that we miss no important technology that could help secure the homeland?

One year ago, U.S. officials discovered a plot to plant explosives aboard a cargo plane leaving North Africa and bound for America. We are fortunate that that plot was uncovered and no lives were lost. That was not high technology. But the question of how that managed to go through and penetrate security is a question for the type of sophisticated technology we should be looking at.

The anniversary of this al-Qaeda-inspired plot should remind us that this Nation's security depends upon our willingness to find and fix known security vulnerabilities before they occur. Our adversary's determination to exploit security vulnerabilities must be met and exceeded by our determination to fill the gaps. The challenge of mitigating threats can only be accomplished by our refusal to settle for the status quo.

We must continually improve our security policies, develop and explore innovative security technologies, take the necessary steps to increase our security posture, and a sentence that I will repeat again, we must open the door for small businesses to access and provide exposure to their technology.

To that end, policy should not undermine the ability of the Department to procure cutting-edge technologies developed by small, innovative firms. Having said that, I would caution that the Department must be prudent in its approach to testing, evaluating, and approving innovative security technology. As we saw with the purchase and deployment of the puffer machines under the previous administration, the failure to exercise due diligence in tests and evaluating innovative technologies before purchase can lead to wasted tax dollars. In these tight budgetary times, the Department must have a clear vision.

I look forward to working with the Chairman, the Chairman of the full committee, the Ranking Member of the full committee as we open the doors of opportunity but yet have as our No. 1 criteria

our commitment to the safety and security of the American people. We can do both. We can walk down that journey together, jobs, technology, security of the American people all intertwined, all No. 1.

As it says in Proverbs, where there is no vision, the people perish. I believe the Department of Homeland Security tragically came out of an enormous and deeply despairing time during the history of America. But we have generated great employees, agencies that have come under one head, and certainly under the leadership of Secretary Napolitano there is vision. I, however, want to see that vision impacted, Mr. Chairman, as we work together to not deny technology but as well to be able to ensure that those doors are open.

That is why I was proud to support the amendment my colleague from Illinois, Mr. Davis, offered during committee consideration of the DHS authorization bill. His amendment would have established an Office of Public-Private Partnership within the S&T Directorate responsible for enhancing the Department's collaboration in the area of security technologies with stakeholders, including small businesses. Unfortunately, this amendment was defeated. I hope we can turn it around again.

Turning to my panel of witnesses, I am pleased that we have witnesses before us today who are current officials of the Department of Homeland Security. We look forward to your insight.

In particular, I look forward to hearing from Mr. Edwards, the Acting Inspector General, because we want to do what is right. I am delighted to be able to hear from those who are involved every day in procurement.

I am also eager, as I indicated, to hear from Dr. Nayak as the new Chief Procurement Officer. Congratulations. I look forward to learning of your challenges and how you are involved in this effort.

I look forward to hearing from Mr. Benda on the potential impact that the cuts contained in the House-passed Republican Homeland Security appropriations would have on the S&T Directorate.

During the 111th Congress it has been certainly my challenge as the former Chairwoman to be delighted that this committee conducted oversight, held hearings, and saw that the House passed legislation addressing the development, procurement, and deployment of innovative security technologies.

Let's work together, Mr. Chairman, and go forward with a vision helping to expand opportunities for America and securing the homeland.

With that, I yield back.

Mr. ROGERS. I thank the gentlelady.

We have been called for votes. We have got about 5 minutes to get over there. Fortunately, there are only going to be two votes, so we should be back in 20 minutes. I apologize, but they didn't ask me.

So we are in recess until we can get back from votes.

[Recess.]

Mr. ROGERS. I will call the hearing back to order and again apologize for the interruption, but I don't think we will have another one before this is over with.

Mr. Benda, you are up. We look forward to hearing your testimony.

STATEMENT OF PAUL BENDA, CHIEF OF STAFF, DIRECTOR, HOMELAND SECURITY ADVANCED RESEARCH PROJECTS AGENCY, U.S. DEPARTMENT OF HOMELAND SECURITY, ACCOMPANIED BY SUSAN HALLOWELL, DIRECTOR, TRANSPORTATION SECURITY LABORATORY

Mr. BENDA. Great. Thank you, Mr. Chairman Rogers, Members of the committee.

I appreciate the opportunity to come before you today to talk about the Science and Technology Directorate and its role in the technology development and acquisition process. I would like to lay out for you how we plan on operating S&T in the future, especially in these constrained budget environments; and there are three areas in particular I would like to highlight.

One, as S&T investment technologies, we are going to focus our investments on transitioning products to use. This is something we haven't done as well in the past as we would like, and this is going to be an effort for us moving forward.

We are going to do this by looking at how the components do their work, look at their operations, look at where their bottlenecks occur, look at how they currently do things, and we are going to identify areas where technologies can make them more efficient. We are going to look at ways we can leverage our technical innovation, from large companies, from small, and ways to improve their processes and make them more efficient. We think this will create a pull from the components for them to want the technologies that we are deploying, and we have to work with our component partners to make sure that we are developing things they are interested in.

Second, we understand the challenges that S&T faces trying to solve the problems of the Homeland Security enterprise. This mission space is too large for one R&D entity to solve all these challenges, so we are going to do what we like to call forage for technologies that exist out there and forage for partners to help us achieve these technical innovations that we are looking for.

When I talk about that, I mean working with the interagency, working with the Department of Defense and look at what technologies they are developing and how can we leverage it. Work with our international partners to see what areas they are interested in. They face a lot of the same challenges. How can we leverage the technology that they are doing? Work with our university partners, Auburn University being a perfect example, Mr. Chairman, of some of the innovation that is going on there.

We hope to bring to bear things such as DOD's investment in a $25 million basic research program called Compressed Sensing that we think can be the baseline for our next-generation automatic target recognition program that we hope to transition to TSA.

We are looking at things such as working with the intelligence community on a new broad-spectrum IR laser that would allow us to do standoff explosives detection in a time line that is relative to mass transit. We are actually leveraging an intelligence community

investment one-for-one dollars, so they are sharing half the cost with this investment.

Third, we have to ensure that we leverage S&T's technical core for the use of the Department. We have got a mandate to focus on operational test and evaluation, the back end of the process, and I think we have done a great job of implementing that, and I think it is a very positive development for the Department as a whole to have a standardized OT&E process.

But we need to leverage the technical capabilities that S&T brings to bear on the front end of the process. How do the components set their requirements? Can we assure that they are technically achievable? Are we not reaching for a brass ring that might be beyond our reach? So working in partnership with the components to achieve that.

One key component of our test and evaluation, especially in the context of this hearing, is the Transportation Security Lab. S&T has developed a very strong partnership over the last couple of years with TSA, and TSL is a key component of that. They perform the qualification and certification testing for all the explosive detection technologies that TSA deploys.

We work very closely with them and have worked to improve our processes to ensure that this is friendly to vendors, friendly to industry, but also provides a robust test environment so that nothing gets deployed before it is technically capable of achieving the mission needs as defined by TSA in the field.

We have worked with TSA to develop an R&D strategy focused on aviation security that Mr. Kane had referenced in his testimony that was published in March 2011. In August 2011, we created a publicly releasable version of that testimony. We think we need to leverage not just with the interagency agency and our international partners but also with industry, and the best way to do that is for industry to know where we want to go.

So this R&D strategy that we have we think is extremely important to get out there so they can see the priority investment areas for S&T as well as for TSA, and we are going to expand this. We are going to do a mapping of how TSA does operations, look at where technology can improve that mapping, and then create what we call an integrated support strategy document for TSA. We are going to prepare this in conjunction with my partner Robin over at TSA and then hopefully come up with a document that both Administrator Pistole and Dr. O'Toole can sign showing the investment and priorities for S&T and TSA into the future and make that public so industry can see where we are going.

In closing, I would like to say that S&T does face some significant challenges. We think we have identified a good path forward where we can leverage interagency and commercial partners. We think we have established good relationships with our component partners.

But the challenge we face is that in fiscal year 2011 our budget was cut 19 percent during the CR. In fiscal year 2012, the House-approved budget cut our budget by 77 percent, if you focus on our core R&D investments. If this comes to pass, we obviously have to scale back significantly our investments in technology. We will have to stop our cybersecurity research, which has won awards. We

will have to stop our investment in small businesses. We will go from 60 CIBER awards down to four. We will have to stop our investment in biodefense research areas.

So this will be a challenge as we move forward, and it will not allow us to invest in the requirement setting and testing/evaluation process. We hope that this budget gets reconsidered, and I look forward to handling any of your questions you have for the future.

Thank you.

Mr. ROGERS. Thank you very much, Mr. Benda.

Mr. Edwards, I look forward to your opening statement.

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

Mr. EDWARDS. Good afternoon, Chairman Rogers, Ranking Member Jackson Lee, and distinguished Members of the subcommittee. I am Charles Edwards, Acting Inspector General for the Department of Homeland Security. Thank you for inviting me to testify about procurement policies at the Transportation Security Administration.

My testimony today will focus on two audit reports that my office completed this year: DHS's oversight of component acquisition programs and DHS's Department-wide management of detection equipment. While neither of these reports focused solely on TSA procurement, the findings and recommendations in both are relevant to the subcommittee's discussion today.

The Department oversees acquisition programs at or about $300 million in life-cycle cost. Individual components such as TSA are responsible for the oversight and controls for acquisition programs below the $300 million threshold.

We have reviewed 17 DHS acquisition programs, including eight programs at TSA, to determine whether the Department has established adequate management and oversight controls. We concluded that, while DHS generally had management oversight and controls in place, it needs to further define policies and strengthen oversight.

We identified two areas for improvement: Clearer guidance and mandated use of available tools. We found that many components needed clearer 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.

For example, TSA personnel reported that they classified all acquisitions that appeared to be programs as acquisition programs because the Department's guidance was unclear. We recommended that the Department create a decision matrix tool that the components can apply in pre-planning phases of the purchasing process in order to reduce this confusion. The Department concurred with our recommendation and agreed to develop a decision matrix.

Another area where the Department can improve its oversight of acquisition programs is by mandating that components use the acquisition tools available to them. For example, the Department has created a Strategic Sourcing Program Office, or SSPO, to help components engage in market research, identify best practices, mini-

mize duplication of effort, and provide Department-wide contract vehicles.

Unfortunately, we found during our review that the Department was not ensuring or mandating that components use the SSPO when managing acquisition programs. We recommended that the Department make sure component personnel are at least considering the use of SSPO during the planning stages of their acquisitions. The Department agreed with this recommendation.

The issue of strategic sourcing came up again during the second audit that I will discuss today, our audit of Department-wide management of detection equipment. Detection equipment includes metal detectors, explosive detection systems, and radiation detectors. For fiscal year 2010, DHS components had a combined inventory of detection equipment of more than $3.2 billion. TSA'S share of the equipment accounts for about two-thirds of that inventory.

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. Thus, we recommended that the Department establish a commodity council for detection equipment that can strategically source these items. Commodity councils are a crucial element of developing an effective Strategic Sourcing Program, including representatives across the organization who act as subject matter experts in the acquisition process.

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 the commodity's single item manager. Other Federal agencies such as DOD use the Commodity Council concept and DHS itself has created the Commodity Council to manage its acquisitions of weapons and ammunition. The Department agreed that an analysis of potential strategic sourcing for detection equipment is warranted.

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 and its components, such as TSA, will continue to improve its acquisition processes.

Chairman Rogers, this concludes my prepared remarks.

I would be happy to answer any questions that you or other Members may have.

[The statement of Mr. Edwards follows:]

PREPARED STATEMENT OF CHARLES K. EDWARDS

NOVEMBER 3, 2011

Good morning Chairman Rogers, Ranking Member Jackson Lee, 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 improvements that can be made to the procurement and acquisition practices at DHS and specifically at the Transportation Security Administration (TSA).

As you know, the DHS Office of Inspector General (OIG) was established in January 2003 by the Homeland Security Act of 2002, which amended 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, inspec-

tion, 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 and address some improvements the Department can make in the oversight of components' acquisition programs. I will also offer some recommendations regarding the Department's acquisition of detection equipment.

BACKGROUND

Acquisitions consume a significant part of the DHS' 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. TSA's budget authority for fiscal year 2010 was over $7.5 billion.

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. OCPO responsibilities also include developing and publishing Department-wide acquisition regulations, directives, policies, and procedures.

Recognizing the continued increase in the quantity and complexity of DHS acquisitions, in November 2008 the USM 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 the Deputy Secretary or Under Secretary for Management. Level 2 acquisitions (between $300 million and $1 billion) are normally overseen by the USM or the Deputy USM and are potentially delegable to Component Acquisition Executives. For level 3 acquisitions (less than $300 million), the Acquisition Decision Authority is the component head. Thus, the Department oversees acquisition programs at or above $300 million in life-cycle cost. Individual components such as TSA are responsible for the oversight and controls for acquisition programs below the $300 million threshold.

On May 26, 2010, the USM issued the Department's latest Major Acquisition Oversight List. The list identified 86 major acquisition programs, projects, and services requiring direct Departmental oversight. TSA had seven level 1 and five level 2 acquisition programs on that list. These programs included:

- Information Technology Infrastructure Program (Level 1)
- Transportation Worker Identification Credentialing (Level 1)
- Electronic Baggage Screening Program (Level 1)
- HRAccess (Level 1)
- Passenger Screening Program (Level 1)
- Screening Partnership Program (Level 1)
- Secure Flight (Level 1)
- Field Real Estate Management (Level 2)
- National Explosives Detection Canine Team Program (K9) (Level 2)
- Security Technology Integrated Program (Level 2)
- Specialized Training (Level 2)
- TTAC Infrastructure Modernization Program (Level 2)

ADDITIONAL DHS OVERSIGHT NEEDED FOR COMPONENT ACQUISITION

While the Department has taken 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. We made four recommendations to the CPO to strengthen the Department's management oversight and controls over component acquisition programs. The CPO agreed with our recommendations and initiated corrective actions.

Our report *DHS Oversight of Component Acquisition Programs* resulted from an audit that was designed to determine whether the Department established adequate management oversight and controls over component acquisition programs. As part of this audit, we reviewed 17 DHS acquisition programs, including 8 programs at TSA. The following TSA acquisition programs were included in our review:

- Screening Partnership Program (Level 1)
- TTAC Infrastructure Modernization (Level 2)
- National Explosives Detection Canine Team Program (Level 2)

- HAZMAT Threat Assessment Program (Level 3)
- Freedom Center (formerly Trans Security Ops Center) (Level 3)
- Performance and Results Information System (Level 3)
- Consolidated Screening Gateway (Level 3)
- Intermodal Security Training Exercise Program (Level 3)

Our report 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 neither fully defined an acquisition program for its components, nor developed consistent guidance for reporting acquisitions in its standard system. In addition, the Department has not ensured that components are using all acquisition tools available and that they have 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. For example, TSA personnel reported that they classified all acquisitions that appeared to be programs as acquisition programs because the definition was unclear.

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.

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 commercial-off-the-shelf 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 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 Lifecycle 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 Department developed inconsistent reporting requirements for components to follow when reporting an acquisition's progress in nPRS, the Department's standard reporting system. 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.

Since nPRS became operational in 2008, the Department has issued conflicting guidance and enforcement for reporting level 1, 2, and 3 acquisition programs. Moreover, the Department has not ensured or mandated that components use nPRS, which would provide transparency and efficiency of component acquisition programs. Because the Department has not consistently mandated use of nPRS, component personnel have developed, or are in the process of developing, their own data-tracking systems.

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.

The Department has also not ensured that the components use the Strategic Sourcing Program Office (SSPO) when managing acquisition programs. 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 using this information to make business decisions 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."[1]

The Department created the SSPO to help components identify best prices available for a requirement, engage in market research to identify the best available vendors and manufacturers, minimize duplication of effort for market research, and provide Department-wide contract vehicles. Because the current guidance is silent regarding the use of the SSPO, the Department may be incurring increased cost for component procurements. In addition, components may be conducting duplicative market research for procurements that the SSPO has performed. The Department should make sure that personnel at TSA and other components are at least considering the use of the SSPO during the planning stages of their acquisition programs.

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:

- United States Customs and Border Protection
- Federal Emergency Management Agency
- Federal Law Enforcement Training Center
- United States Immigration and Customs Enforcement
- Office of Procurement Operations[2]
- Transportation Security Administration
- United States Coast Guard
- United States Secret Service

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

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

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 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. As of March 1, 2010, TSA's detection equipment accounted for 66% of the Department's total inventory.

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.

STRATEGIC SOURCING

As discussed above, 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 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 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.

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

Though DHS was established by combining 22 agencies with different legacy systems, missions, and cultures, it 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 such tools as strategic sourcing and a commonly-applied definition of an acquisition program will help the components such as TSA and will result in more cost-effective and efficient acquisitions.

Mr. Chairman, this concludes my prepared statement. Thank you for the opportunity to testify and I welcome any questions from you or Members of the subcommittee.

Mr. ROGERS. Thank you. Great. Thank you very much.

I will start off on the questions.

Dr. Nayak, what is the one thing that DHS could do differently in engaging with the private sector that would have the largest impact on industry's ability to better support Homeland Security, in your view?

Mr. NAYAK. That is a great question. I don't think there is any one particular thing, but let me give you one, and let me also just add the entire list, because you really have to do a number of things.

When we talk about industry, we are talking about everybody that is out there, as you well know, and being open and transparent in communicating with them. So one of the things that we can do is specific industry days around procurements have to be done better. You can't have one-way communication. You have to have two-way communication. You have to sit there and you have to wait for every question from everybody who participates in that industry. That is one.

You obviously know RFIs. We need to increase the number of RFIs that we use, increase the number of draft RPs. It is a little challenging sometimes in general because of the way we get our money and funding. For instance, in the last fiscal year, we had to spend $10 billion in the last 5 months of the fiscal year.

But a couple other things that I am doing that are new. One is we have created an industry liaison in every component. So we have got an on-line forecasting system of procurements in advance.

Industry sees it. They call up. They get a program manager. Now we have a belly button that they can actually go to a live person to really find out what is the status of that.

Mr. ROGERS. Let me go back to your industry days—because you talked about that in your opening statement, too—about the revisions you are going to make in it. Two questions I have.

One is: What is your time line for seeing that new and improved industry days program implemented? Then, second, you have talked about how different the industry segments are, and you are right. When you are interacting with Lockheed or Boeing, it is not the same as a small hub-zone company that you deal with. So in these industry days, will you do those separately? Like will you have an industry day for small businesses separate and apart from the one with the big guys, or do you do them all at once?

Mr. NAYAK. Okay, so great question. Let me address the first point first, what are we doing different in terms of industry days themselves and when is the time line.

The time line is immediate. I have already issued an acquisition alert that essentially gives everybody across DHS direction. We have got to do these things well. But those are the ones around specific procurements.

Outside of that, we have got to have a mechanism to talk to industry at large about capabilities, outside and away from procurements, so that we can have continuing dialogue. That is something that some people will classify as an industry advisory council.

Sometimes when you hear "industry advisory council" you only think large business and you don't think small business. So what we have got to do, the nut we have to crack, is to figure out how to do this in a transparent way working with the private sector. So that is one big thing that will make a huge difference moving forward.

The last thing I want to mention, and it is something new, it is something that we heard from industry, is to have reverse industry days. So often when we have industry days, we are communicating to industry. By the way, it is both large and small business, anybody who wants to come in. But a reverse industry day would be where we say here is the capability. Industry can come in and talk to us about the capability. We can get a little bit smarter, again, away from procurements where things get extremely sensitive.

Mr. ROGERS. That is what our industry panel talked about. They would like to see more of that dialogue, more of a skull session.

I serve on the Armed Services Committee as well. One of the things the DOD will do is bring in industry and say: Here is the problem we got, and we are trying to figure out how to meet this problem. What are your thoughts? Everybody just kind of thinks out of the box in that session, and they go back and they work on it, too.

That is the kind of dialogue I am hoping to see developed in DHS so that it is more of a partnership in trying to solve problems.

Mr. NAYAK. So that is what you are going to see moving forward.

Mr. ROGERS. That is great.

Mr. NAYAK. One more point, and that is on small business. We connect with small business. Every communication in industry days is open to everybody, but we do have specific and unique

events for small business. We participate in over 100 outreach events, and then we have 10 separate vendor outreach segments where we meet one-on-one with companies. So across the board——

In a previous hearing you had a gentleman here from CSIS, I believe, testify. Obviously we contract to support the mission, but it is also neat to know that our business is spread pretty evenly amongst large, medium, and small business.

Mr. ROGERS. That is great.

Mr. Kane, you made reference to some new scanning system that you are going to be implementing pretty soon that will be able to determine or detect fraudulent ID. How will that work?

Mr. KANE. Mr. Chairman, we call it—it has a long name—the credential authentication technology and boarding pass scanner system. So when you come up today you walk up to the travel document checker at the checkpoint, and they typically have a light and a loupe that they are going to look at those documents.

This is technology that will read credentials such as your driver's license, such as a passport, which is the two most common you will see at a checkpoint. Then it will say, yes, this is a valid Virginia State driver's license and it has all the characteristics that a Virginia State driver's license has. It is going to look at that boarding pass and say, yes, this is a valid boarding pass and the name matches between these two documents. So the two documents match each other, and it is a valid boarding pass for that day. So that gets away from a lot of the manual errors that can be made.

Mr. ROGERS. Will there have to be a handler involved, a person, or will they just go up to a kiosk?

Mr. KANE. Right now, there will still be that travel document checker in the process right now. It will be a little more automated in that the passenger will put their boarding pass up, but the officer will actually handle the credential.

Mr. ROGERS. Excellent.

My time has expired. I now yield to the Ranking Member, Ms. Jackson Lee, for any questions she may have.

Ms. JACKSON LEE. Mr. Chairman, thank you very much.

Let me also acknowledge the presence of Mr. Davis of Illinois. I know you have acknowledged the distinguished gentleman, Mr. Turner, I think and Mr. Cravaack for their presence here today.

I want to pose a question. Mr. Edwards, I mentioned Mr. Davis because he had offered an amendment during the DHS authorization that would have established an Office of Public-Private Partnerships within the S&T Directorate responsible for enhancing the Department's collaboration area of security technologies with stakeholders, including small businesses. I know that part of his intent is to ensure that these directorates work well.

So let me pose a question to you, Mr. Edwards: In crafting for us, what is the most critical problem with the relationship between TSA, the Department of Homeland Security, DHS, S&T, and DHS Office of Procurement, and how can lawmakers or officials at the Department address it?

Mr. EDWARDS. Thank you, ma'am.

S&T tests a variety of technologies, including systems made up from a number of technologies. S&T provides test information along with its recommendations for best models to TSA and other

components. TSA and other operational components make the product selection and procurement decisions and are not required to follow S&T's recommendations on products.

Also, you know, if you use S&T in a similar way as their sitting role in the Acquisitions Review Board, rather than having them review during the acquisition process, if there is a decision memorandum that leverages S&T's technical expertise prior to the acquisition process, it can potentially save lots of dollars and time.

Ms. JACKSON LEE. If there is a—I am sorry?

Mr. EDWARDS. There should be a decision memorandum from S&T giving their technical expertise and their opinion ahead of—before the processes get started. That would really go a long ways.

Ms. JACKSON LEE. So information goes a long way if the memorandum exists that can either be passed from whether it is DHS, TSA. Of course, you indicated they don't have to accept the recommendation or the information—they can accept the information, not the recommendation. That is a document that we can track and we can utilize for, I think, informed decisions.

Mr. EDWARDS. Absolutely.

Ms. JACKSON LEE. I think that is an important way of coordinating. More communication I assume would—and I don't want to call it forced communication, but should there be some structure that puts in a mechanism for required communication? Is that——

Mr. EDWARDS. Absolutely. I quite agree with you.

Ms. JACKSON LEE. Dr. Nayak, thank you, and let me welcome you to the position. I understand you have been here about a year.

Let me do one question that might seem as if I am asking you for a 3-hour presentation, but I am not because, I have a follow-up question.

What is your vision for the procurement area for DHS?

I heard in another hearing someone making a statement that the Federal Government buys things, needs things, and utilizes products; and many times small, medium, and large businesses are either rebuffed or confused about how to access providing their product to the Federal Government. So, quickly, what is your vision?

That is my first question. I am going to put them both together. That may be two or three sentences in what you want to see happen.

But then the other part of it is we are grappling with not only the supercommittee but the existing proposed House budget which impacts DHS' effort to assure accountability—or how would you think that is impacting assuring accountability—and an acquisition workforce. This budget, how is it impacting an acquisition workforce adequate to stimulate growth and innovative solutions in Homeland Security technology? So what direct impact—these proposed cuts in the DHS budget as it relates to your area, what direct impact will it have?

So the first question is your quick vision for what you perceive you can do and the second would be that direct impact.

Mr. NAYAK. Thank you for the questions.

The vision in a nutshell is really my job as the chief procurement officer and hovering over $14 billion to spend is I have got to be able to prove that we are getting a good deal for the taxpayer with all of that spend.

Specifically, I have four priorities, and those support getting a good deal for the Government and for the taxpayer.

They are quality people. I have got to have the best people in place. We have about 1,400 contracting people right now.

We have to do good contracting.

I mentioned strategic sourcing. Mr. Edwards mentioned strategic sourcing, mentioned detection equipment, which we are moving well along the way to strategically sourcing detection equipment.

Quality program support. I have to influence the success of the more than 500 DHS programs that are supported by contracts that deliver quite a bit of the mission.

Ms. JACKSON LEE. How many programs did you say?

Mr. NAYAK. There is more than 500. There is about 82 major programs with a life-cycle cost of over $300 million.

Then the other priority I have added as the new CPO for a little bit more than a year is quality interaction with industry. I mean, it is absolutely key. If we are going to contract with industry for $14 billion, we have to talk to them at every stage of the process. Talking to them well in advance, all businesses of all sizes, helps us clarify requirements, and that ultimately helps us get a better deal. So, all in all, the vision is to get a better deal.

In terms of the budget impact and specifically in my area, line of business, which is acquisition, it would really, really basically set us back. I have been through this myself when I was with the IRS. When I came into the IRS, there was a lot of talk about not being able to modernize tax systems; and since then, at a minimum, we have E-File.

When I got there in procurement, there were only 20 or 30 procurement people. We built it up to 500 people, and since then they have a fairly premier procurement program.

Similarly, at DHS, if we had to sustain these cuts, here is what pretty much would go out the window: Replenishing our acquisition workforce, gone; program oversight over those 500 programs, gone; oversight in terms of all of our procurement actions, 90,000 actions in nine contracting offices across the Department, minimal at best.

The $14 billion is spread through nine contracting offices. Two are of them report directly to me, and they account for about $6 billion. So if my organization, which includes those folks, are cut, you know, there may be an immediate cost savings in the cut itself, but the long-term impact is going to be devastating. We most likely will be back here chatting about all kinds of stuff in terms of acquisition that we really don't want to.

Ms. JACKSON LEE. Let me just ask one quick question, if the Chairman will yield to me for a minute.

Mr. Edwards mentioned one fix could be, in terms of communication between TSA, DHS, and S&T, is an S&T memoranda that you would ultimately get, Dr. Nayak, and others, so that when some S&T product has been researched and reviewed there would be some chain of fielding that work, that assessment to you, to TSA, and others. In addition to I think I said maybe a structure that would channel that document so you would promptly get an assessment of a new technology that had been reviewed.

Would that be helpful, Dr. Nayak? I was speaking to you. I was saying Mr. Edwards mentioned an S&T memorandum, and I men-

tioned a structure to get that memorandum to the appropriate persons. Would that be helpful to you once a product was reviewed?

Mr. NAYAK. I think helpful to the Department, yes.

Ms. JACKSON LEE. So getting a quick document to you that assessed a product would be helpful?

Mr. NAYAK. Yes.

Ms. JACKSON LEE. Would be helpful in streamlining your work, or at least assessing whether that product should be utilized?

Mr. NAYAK. Yes.

Ms. JACKSON LEE. I will yield back now. Thank you.

Mr. ROGERS. The Chairman is now proud to recognize our newest Member here on the subcommittee, Mr. Turner, who has recently been elected in New York, of all places. So we are proud to have you and look forward to your questions for the witnesses.

Mr. TURNER. Thank you, Mr. Chairman. New York continues to elect people. Not too many Republicans. That was the odd thing.

A question, please, for Mr. Kane. We have aging technology, and I would like to hear what is in the pipeline, how it might be affected by the budget realities. I am particularly interested in the shoe technology which I find is the most abhorrent of all the security techniques, as necessary as it absolutely is. If you would?

Mr. KANE. Congressman, yes, sir.

We have a number of technology programs in the works right now. You know, as TSA stood up 10 years ago, obviously we used a lot of equipment that was in place and then we built out the baggage screening system in a very quick time frame. So much of that technology is nearing the end of its life, particularly the expensive technologies, which is the baggage screening equipment down in the baggage rooms.

We have a recapitalization strategic plan to replace that equipment. I think what you will see us do is focus more of our budget resources on the recapitalization effort, focused on EDS, rather than new in-line systems in airports. With the Recovery Act, with some of the other funding that has come our way over the past couple of years, we have been very fortunate to build out a number of the in-line systems or get them funded so that the airports could build out their systems. So just the EDS in particular, we are going to focus on the recapitalization of those pieces of equipment.

We also, of course, have the advanced imaging technology going into the checkpoints that replaces or sits alongside today the walk-through metal detectors, a completely new ability to detect non-metallic threats. It just didn't exist before we brought that technology to the airports.

We also are recapitalizing the X-rays, the carry-on bag X-rays as well with the multi-view X-ray and with some ability to have auto-detection on there for bulk explosives.

In addition, I mentioned previously the credential authentication technology. As I described earlier, if that proves successful in our field tests, after the beginning of the year you would see that start to show up at every checkpoint in the country as well.

So we are doing a lot of work. We are trying to improve those technologies over time and have a spiral development approach, and that is where S&T helps us quite a bit.

Then I think with the shoe scanner in particular—and it is everyone's favorite topic a lot—we found that just a difficult technology challenge to solve with everything that comes with a pair of shoes in the airport environments. I think a lot of what we are doing with our TSA PreCheck and prescreening and identifying those travelers who we feel are very low risk to the system and moving away from an one-size-fits-all approach will help us solve some of the shoe issue, allowing people to keep shoes on, for the most part, and those expedited screening lanes will help solve some of that problem and some of the frustration especially frequent travelers feel when they have to do that.

Mr. TURNER. Thank you. I will continue to wear slip-on loafers until that day.

I experienced something 2 weeks ago on an international flight that would apply to domestic, and I don't know if this is solved through technology or procedure. One of the military personnel traveling with me, we went through two checkpoints. In the first checkpoint, he bought a bottle of expensive brandy, and it was handed to him after he got through security. Yet on the next flight we were checked again, and he was stopped for liquid. It was poured down the drain.

That same thing may happen coming back, say, from Europe to the States, going from international to domestic. You have a carry-on that goes through again.

Any comment? Was that just tough luck?

Mr. KANE. I think it is understanding the systems that are in place. So, internationally, I can't speak to all the different regimes, although I know a lot of people will allow the duty-free liquids onto the flights, particularly with the secure technology, the tamper-evident bags they have over in Europe.

We don't accept that in the United States. So when you come into the United States you need to put that bag from your carry-on into your checked baggage, and in virtually every case you are going to have to recheck that bag and you have to shift it over. If you don't understand that, you will sometimes experience difficulties at the checkpoint.

Another technology challenge the world is obviously trying to solve is liquids packed in bags. We haven't cracked that yet. We are working towards it. It is another difficult challenge, though, to be able to do that and understand explosives in bags. On the other hand, it is a real threat. So we have to be able to address that threat.

Mr. TURNER. Thank you.

I yield.

Mr. ROGERS. I thank the gentleman.

The Chairman now recognizes the gentleman, Mr. Davis, for any questions he may have.

Mr. DAVIS. Thank you very much, Mr. Chairman.

Mr. Kane, during his appearance before the Senate Homeland Security and Governmental Affairs Committee yesterday, in response to concerns expressed by Senators Lieberman and Collins, Administrator Pistole expressed his concern that there is a perception that TSA's X-ray whole-body scanners are not as safe as they could be.

I have some concerns about both the perception and the reality of the safety of these machines. My concerns extend to both the flying public and the Transportation Security Officers that work in the vicinity of these machines on a daily basis, and that is why I encourage the inclusion of language in the TSA authorization bill that would require an independent third party to carry out a study on the machines. I commend subcommittee Chairman Rogers for including that language in his bill.

In light of the bipartisan and bicameral concerns about the safety of these machines, do you believe that an independent third-party assessment of the safety of the machines and the operating environment validating TSA's findings might be helpful?

Mr. KANE. Congressman, I think we have had a number of independent third-party assessments of the technology. Johns Hopkins University did it. The Army's Public Health Command has done an assessment of the machines, and they do so on a regular basis in airports. We had an experiment with them in our lab, but they ran it where we took over 93,000 different samples. We are awaiting the final report on that. But it is going to show again that they are well within the safety standards that are set and that we set in the requirements that we published out to industry.

Over and over again, the people we have had study this have said the technology is safe and well within the standards that we need to meet to be able to use that technology; and the benefit—the security benefit that we get by being able to detect a non-metallic threat and maturing that type of detection capability in the airports is substantial.

Mr. DAVIS. Thank you very much.

Gentlemen, let me ask you, within my Congressional District, which includes a large part of the City of Chicago, our average daily ridership of bus and rail combined is 1.6 million riders a day. Over 75 percent of those riders use buses to go to work, to the grocery store, and many other places that they use to live their lives. I have major concerns about technology related to bus system security.

In the past year in my district, and even in Chairman King's district, city buses were stolen and operated by non-transit employees for hours. In Chicago, a man stole a Chicago Transit Authority uniform, got in a bus on the south side, and drove from 8 o'clock a.m. to midnight, and then returned the vehicle to the garage and struck a parked bus. Fortunately, there were no passengers. But this incident could have taken place while he was driving the bus route.

My question is: Are there any technologies that are ready for use or in the process of being created that you are aware of that would specifically deal with bus safety and security?

Mr. KANE. The only one I am really aware of—and I am not very current, I have to admit, Congressman, on where we are on this—there are some technologies that from a remote location you could shut down a bus. So if you knew that bus had been taken that you could use that. The bus authority, the transit authority could use that to shut the bus down.

Clearly, there is locator technologies that trucking companies and shipping companies use that allow them to track different things. So you could use that technology as well.

I know we have run some pilots on those types of technology. I am not sure exactly where we are. We would put something like that on our approved equipment list that would then be able to be available for grant programs or for transit authorities to be able to procure off that approved equipment list. That just kind of says, hey, TSA has taken a look at this many times with S&T. It is a good technology, and here is the capabilities that that would have.

Mr. DAVIS. Are any of the rest of you familiar with anything other than that?

Mr. BENDA. Congressman, Paul Benda from S&TP.

We do have one new technology that we developed in public-private partnership with industry which is called the Brave Camera. One of the issues that we have seen in the past in Israel, if you have a suicide bomber come on board a bus, if you have any type of surveillance in place, it destroys the camera and the recording that allows you to go back to do forensics.

So we partnered with industry, put our requirements out, and they used their own internal dollars to build a camera that could meet the explosive blast and actually allow us to gather the data off that camera rather quickly. S&T then sponsored a test actually of getting a bus that was out of its life cycle and blowing it up with the camera inside.

So that type of camera in place, while it is forensic, if you had that type of camera system in place, you would monitor it from a central location, as Mr. Kane had stated, in case an activity went on. But if the worst did happen, you could actually find out who that perpetrator was and learn from that incident so it doesn't happen again.

Mr. DAVIS. Thank you, gentlemen, very much.

Mr. Chairman, I yield back.

Mr. ROGERS. The Chairman now recognizes my colleague from—what State is that—Minnesota, for 5 minutes.

Mr. CRAVAACK. God's country, sir. God's country.

I thank the panel for being here today. I appreciate it very much. Thank you for coming here and enlightening us.

I did have a quick question, Dr. Nayak. Could you tell me a little bit, do you know how many—it is my understanding we have purchased 700 AT carry-on baggage X-ray devices, is that correct?

Mr. NAYAK. I am going to have to defer to Robin.

Robin, do you have an answer to that?

Mr. KANE. Yes, sir. The last procurement we made was slightly over 700. We, prior to that, had around 900 in the field. So the total is near 1,600.

Mr. CRAVAACK. So you have purchased around 1,600 machines. Okay. All right.

What is the total—I hope I will be able to get a group consensus here. What is the total cost per unit of these AT–2 machines? Do you know?

Mr. KANE. In round numbers, it is around $150,000.

Mr. CRAVAACK. Per unit?

Mr. KANE. Yes, sir.

Mr. CRAVAACK. Are these devices being used at any current TSA airports right now?

Mr. KANE. Yes, Congressman. We have at least 950 in the field, and a number of the 700 are also out into the field.

Mr. CRAVAACK. So you have about 950 in the field and you purchased about 1,600, is that correct?

Mr. KANE. That is correct.

Mr. CRAVAACK. Is there any that are being stored or warehoused in Dallas, Texas, right now?

Mr. KANE. Yes. We have some still remaining in the warehouse down in Dallas.

Mr. CRAVAACK. Do you know how many those are?

Mr. KANE. It would be whatever we have not deployed of the 700, but it is probably over 600.

Mr. CRAVAACK. Okay. Do you know what the cost of warehousing these are?

Mr. KANE. I don't have the specific cost for that. We pay—I would have to get you the number for the record, Congressman, in terms of what we pay for our overall warehousing.

Mr. CRAVAACK. Okay. Could you do that by November 10? Would that be a possibility?

Mr. KANE. I could certainly work through our folks to be able to provide that.

Mr. CRAVAACK. Okay, great.

I want to turn a little bit to the puffer machines, if I could. Has the TSA destroyed all its collection of the puffer machines at this time?

Mr. KANE. We disposed of all of those. We don't destroy them. We turn them over to the Defense Reutilization Office, and they dispose of them or reuse them. I suspect most of them have been disposed of. I don't know that for certain.

Mr. CRAVAACK. Do you know what the cost is for the destruction of each machine?

Mr. KANE. I don't.

Mr. CRAVAACK. Okay. All right. Then you are probably not going to be answering my last question. I would like—if you would, please, I would like to get the answer to that question as well by November 10.

Then also I am curious to know what is the total cost of the program, including the purchase, storage, and the destruction of each one of these machines and how many machines, puffers, were there?

Mr. KANE. I forget the exact number of the puffers that we have had. We disposed of them really prior to my coming on this job, so it has been a few years. I know the total value is somewhere I think in the $30 million range of that program.

Mr. CRAVAACK. For the purchase?

Mr. KANE. Right, for the purchase. The disposal cost is going to be a small fraction. At the end of the day, again, that will be lumped into the aggregate cost that we budget every year for disposal.

Mr. CRAVAACK. Okay. Could you also have the TSA provide my office with the most recent quarterly warehouse inventory report?

Mr. KANE. We can get that back for the record as appropriate.

Mr. CRAVAACK. Okay, I appreciate that.

I guess the next question I might have, I would go back to Mr. Nayak, if I could. What are the consequences if the TSA does not follow DHS procurement guidance?

Mr. NAYAK. The answer would be it depends on what stage of the acquisition life cycle they are not following guidance. If you have any specifics, I would be happy to answer it.

Mr. CRAVAACK. What if, for example, that we weren't following procedures in regards to the puffer machines and the AT–2 machines?

Mr. NAYAK. So with regard to major programs like that, these kinds of decisions would be coming up to our Investment Review Board, and they most likely would not make it through at this stage in our evolution of the Investment Review Board. I was not around during these purchases.

Mr. CRAVAACK. It is a hot potato.

Mr. NAYAK. Yes.

Mr. CRAVAACK. Thank you very much for that.

I would also like, Mr. Kane, if I could ask you just real briefly, what are we doing for expediting passage through TSA checkpoints for the business leaders or people that travel on business routinely? They are pretty much trusted travelers.

Mr. KANE. Yes, sir. So we kicked off four proof of concepts in four airports on October 4 called TSA PreCheck, and that is to a small group of the known travelers, just to prove out the concept of being able to assess that risk, understand it within our secure flight system, put it within the boarding pass, and allowing those people an expedited screening process through those four lanes that we are proving out the concept in.

In those lanes, they will typically get to leave their jackets on, leave their shoes on, leave their belts on, and put their carry-on—their laptops back in their carry-ons and a compliant 311 back in their carry-on. So we have—those pilots are running.

I believe the administrator also testified yesterday that he thinks those will expand, as long as we are successful there and can prove out the concept.

Mr. CRAVAACK. My time has expired. I yield back.

Mr. ROGERS. Great. I thank the gentleman.

Mr. Benda, in your comments earlier you made a statement industry needs to know where we want to go, and I really liked hearing that. How do you envision seeing that happen?

Mr. BENDA. Well, I think it is a two-step process for us, sir. I think the first step we have already taken with TSA. They have actually been a partner in terms of developing requirements and putting together a plan, having an aviation security research and development plan. Then having one that is publicly accessible I think is key, so that people know exactly what we are doing.

I think TSA does a good job of putting their requirements out in terms of what their detection technologies need to be, but we are looking to expand that. We are looking to go just beyond the aviation security R&D and into all of the R&D that we are going to be doing for TSA.

So they have agreed to develop a pilot process with us where we are going to examine the different mission areas that we are going

to focus our investments on, map out how those operations are done, try and identify where we think technology can achieve some efficiencies to be gained, and then identify those, identify what investment S&T is going to make, what procurement investments TASA plans to make in the future—because there is no point in investing in R&D dollars if there is not a future investment strategy or market for that technology—and then come up with a publishable document that we can put out to industry to show them this is where we are going to be investing our dollars as well as where TSA will be procuring.

Mr. ROGERS. This would be for any one of you that want to take it, but one of the complaints that we have gotten from industry, particularly smaller companies, is that you all will put out an RFP and they will spend a significant amount of time and money preparing for it, and then you withdraw it or decide not to go forward. How frequently does that happen and why?

Whoever would be the right person to hit that one, I would appreciate it.

Mr. NAYAK. I will just jump in, Chairman.

It does not happen that frequently, but here is the problem. When it does happen, it hurts. You know, I was in small business. I was in large business. I understand it, because I also was the guy that did the proposals. So I lived and breathed that.

So, you know, it did something we totally don't strive to do. It doesn't serve us well either. We drag our own folks through the process. It is never our intention, and then occasionally it does happen and industry does express themselves. So we make every attempt to not have that happen.

Again, very importantly, it is really the minority. It not the majority. It is the exception.

Mr. ROGERS. Well, I would like to know if you could do a review, like go over the last 3 years, how frequently has that taken place. I have one company that spent about $100,000 preparing. You know, for a small company, that is a lot of money to have it then withdrawn. It does hurt. So I would appreciate it if you could give me a ballpark number of how often that happened and what percentage that is. It may indicate just what you said, that it is a very rare occasion.

Mr. Kane, does TSA fully adhere to DHS acquisition guidance in all of its procurements?

Dr. Nayak, you can feel free to follow up on that.

Mr. KANE. Mr. Chairman, we certainly strive to adhere to all the DHS guidance in our all of our procurements. I think we have all gotten better at that. But I would not say we are 100 percent compliant with everything it is we need to do, just in catching up with when the acquisition directive was published and many of our procurements were on-going and getting ourselves square with all the guidance as we have these on-going procurements happening. But we do follow the process with a very stringent test regime.

The one thing the Department and us, I think we are the first operational test agent within the Department, meaning we can sign off our own test reports, still with the oversight of S&T's independent authority to have oversight there. Then we go through the investment review process with all those test results and with all

those folks who are sitting in the room with the knowledge of the program.

So I think we are much better at adhering to the guidance, and we intend to bring ourselves fully aligned in the near future.

Mr. NAYAK. So I will just add to that and just say that we have the Investment Review Board. There is a lot required of major programs at DHS, a lot of documentation, appropriate cost estimates. Part of this is staffing up appropriately in the components, which we have had a difficult time doing, frankly. So I wouldn't say everybody is perfect, but I would say our system now has evolved to a point where we can slowly move towards perfection.

Mr. ROGERS. Mr. Kane, development and procurement of the Advanced Imaging Technology, AIT, is of great interest to this subcommittee. To what can extent did TSA adhere to the established DHS acquisition process administered by the DHS Acquisition Review Board in procuring AITs?

Mr. KANE. So we adhered to the process, but that was one of those procurements that was on-going as the acquisition directive 102, AD 8102 as we know, it was promulgated. So there were some of these documentation requirements that we did not complete.

But what we did with the AIT, we went out and we did operational test and evaluation. We had those results reviewed. We presented those results to the Acquisition Review Board and any adjustments we had made in terms of many of the requirements along the way and got an affirmative decision for the full procurement and deployment of those systems.

Mr. ROGERS. Okay. To what extent do the AITs deliver in the performance initially promised in the original performance specifications?

Mr. KANE. Sir, we are getting probably into areas of sensitive security information, Mr. Chairman. But the AITs are obviously the most effective technology we have for defecting nonmetallic threats and the only one we have for detecting nonmetallic threats on people.

Mr. ROGERS. Thank you very much.

My time has expired. The Chairman now recognizes the Ranking Member for any further questions she may have.

Ms. JACKSON LEE. Thank you, Mr. Chairman.

I want to pursue making sure that we have all the resources that we need to have to address all levels of business. But in particular we are finding through these hearings the need to focus on small businesses, with probably a great amount of both talent but also a great amount of inventiveness.

Mr. Benda, you are in a very important area, and so my question is: If the present budget was to go forward as proposed by the House budget, what would happen in your area with respect to any impact on small businesses and the work that you do, the work that your particular area is engaged in, S&T?

Mr. BENDA. Thank you for the question, ma'am.

We consider small businesses to be the engine of innovation for this country. We think they are critical to our success. Some examples if that budget did go forward, as I stated earlier, our core R&D funding would be cut by 77 percent. What that would mean is that our current SBIR process, our small business innovative research

program, we fund around 60 programs a year, would drop down to four. You would see a massive decrease in the amount of funds going to small businesses through that program.

Ms. JACKSON LEE. Give me that number again. You fund how many?

Mr. BENDA. Currently, on average, ma'am, we fund 60 programs through our Small Business Innovative Research Program. If the budget went through as proposed, we would only be able to fund four.

We also leverage small businesses, and where we have seen a lot of growth in our funding of small businesses is in the cybersecurity area. A lot of small start-ups happen on the coast.

We recently lead a cyber BAA—it is a broad agency announcement, it's a contract vehicle—and we had over 1,000 respondents to that vehicle, even though it is fairly small if you compare it to DOD standards. It is around $75 million over 5 years. We had 1,000 respondents, and we had a whole range of companies that responded to that, with a significant part of that being small businesses.

Those kinds of efforts would end. We would not have any money to pursue cybersecurity efforts. We would have no money to pursue any additional funding for bio-attacks, any additional funding for detecting submersibles that could smuggle drugs into the country or nuclear weapons. We would have to end all of our R&D in those areas. We estimate that the S&T funding currently funds around 1,400 science and engineering jobs. Those would all be lost.

So we think that these kind of cuts would be catastrophic, at least towards the future of homeland security. That we would simply have to make do with what we have, not be able to innovate or improve our efficiencies.

Ms. JACKSON LEE. Thank you very much.

That sounds pretty devastating to me, and particularly since we know we live in a different environment of franchise terrorism and one that acts on surprise, and even though intelligence is very important, but acts on innovative technologies that can be created.

Thank you very much.

Dr. Nayak, let me ask you to think about or to recommend for TSA in order to issue and award contracts in an efficient manner, we just have highlighted the puff technology, while at the same time ensuring competition in the proper use of TSA funds in technology development, so what do you recommend that TSA engage in in order to issue and award contracts in an efficient manner? What would be your suggestion?

Mr. NAYAK. I think, as Mr. Kane alluded to, we have a good process in place now through this management directive with respect to managing major programs. We just need to see that actually sort of take place over time.

In other words, we have got an Investment Review Board. Major programs come up at least 11 times for review. We now have and we are developing an information technology tool where we have insight, real time insight, into—eventually it will be all 500 programs but, right now, our major programs. So just having the components go through that process will ensure effectiveness.

Ms. JACKSON LEE. Let me follow up with just one more question. Thank you.

I am not sure if this was articulated in your testimony, but I am going to ask for sort of an ABC on that new process. I know you articulated it just to me. But if there is a non-classified "here is what is in place," I think it would be helpful for it to be in this committee or directed to all of us.

Mr. Chairman, I am asking if that document or summary could be submitted to us, please.

Mr. NAYAK. I am happy to do that.

Ms. JACKSON LEE. Thank you.

Let me go to this idea of small businesses, and it builds on testimony that we received on the Department's growing number of contracting operations with small and medium-sized businesses. We appreciate that growth. In fact, I am going to make a statement that we want to see that growth across the spectrum of Government agencies.

We also learned that, based on the Federal procurement data system, DHS currently spends about 70 percent on service contracts and 30 percent on product contracts. One would tend to believe that a small business could work closely with the idea of service contracts. How does the Department reach out to small businesses to determine what current or emerging technology has been developed that could be applied to Homeland Security initiatives, particularly in this scheme that you have 70 percent service-30 percent product, and how can we ensure that the Department maintains a healthy process with medium and small businesses? How can Congress continue to support this mission? Dr. Nayak.

Mr. NAYAK. Thank you.

So with respect to technology specifically, I will let my fellow witnesses——

Ms. JACKSON LEE. Mr. Kane, maybe, from S&T.

Mr. NAYAK [continuing]. Can share. But I would like to share how we are doing.

Just business overall, the spread is essentially about—there really is no definition for medium business, but the CSIS report that the gentleman who came and testified in the second hearing, about 40 percent of our business goes to large business, about 30 to what they defined as the middle, and 30 to small business.

What I do want to share is, from a Departmental perspective, we take all businesses seriously in order to achieve the mission. But with respect to small business specifically, I do want to say it is important to note that we rank either one or two in every small business category among the top seven spending agencies in the Government which comprise 90 percent of the $500 billion spent in Government.

So, just very briefly, in overall small business, we achieved 29 percent, and that was No. 2. In small and disadvantaged business, we achieved 11.5 percent of our spend. That was No. 1. In women-owned small business, we achieved 5.9 percent. That was No. 2 among the top seven spending agencies. In small disadvantaged veteran-owned business, we were No. 2 with 4 percent. No. 1 was the Veterans Administration, who has statutory authority to award contracts to veteran-owned businesses. We are very proud of that.

HUBZone, which is very difficult to achieve, we achieved 3 percent. We were ranked No. 1.

So we take small business extremely seriously. We have had significant achievements over the past 3 years. At a macro level, the SBA has a new rating system. They give you A through F. We have had an A the last 2 years. We believe we are going to get another A in fiscal year 2011.

But with respect to connecting with small business and technology I would ask Robin or Paul if they had anything to add.

Mr. KANE. I would just briefly add that we have support contractors that support our technology programs, and one of those we set aside for a small business set-aside and awarded those contracts, a multi-award contract for professional engineering and logistic services that we did as a set-aside for small business, and we used multiple small businesses in the task quarters of that award.

Ms. JACKSON LEE. I yield back at this time and thank the witnesses.

Mr. ROGERS. The Chairman now recognizes the gentleman from Minnesota for any further questions he may have.

Mr. CRAVAACK. Thank you, Mr. Chairman. There will just be one.

Prior military—the military I have seen through the years, especially in aircraft where you would have a joint conglomeration of technologies in, for example, the Joint Strike Fighter. Though it might have a varied mission but at the same time being able to land at sea, the knuckles and the landing gear have got to be a little bit tougher, but mainly the same type of platform.

What I want to see, I was wondering what the TSA is doing like in collaborating with some of the other agencies, say Border Patrol, in being able to combine the technology and the cost savings, and how much—I don't know if Mr. Kane or Dr. Nayak, you can answer these questions—but in combining the technologies, how much cost savings do you see there?

Mr. NAYAK. Let me first turn the mike on.

Through our Strategic Sourcing Program, okay, so, essentially, we have 90,000 transactions, $14 billion for the last 3 years that we spent.

What is strategic sourcing? It is the capability to look at those transactions and decipher how you can do exactly what you mentioned, Congressman, and that is see where there are opportunities to bring things together, leverage volume, just get a better deal overall.

We have 42 initiatives in the Department that we have awarded. We have saved over $1 billion since our program got up and running in 2005. Our goal this year was $200 million. We have another 13 or 14 initiatives on the way. In fact, the canines was a strategic sourcing initiative success story. That is how we work it. That is done out of my office. It is on-going.

Detection equipment, which Mr. Edwards mentioned, is another interesting one where we agreed with the IG's Office. Detection equipment is an interesting one.

In fact, all of these are very interesting. They take a little bit of time. Because you have to first sort of find the opportunity, which now we have the ability to do that. The second thing is get a work-

ing group together to figure out what of this can you really strategically source. On the surface, it sounds really good. Detection equipment, let's do it all. But a working group has to sort of work that out. Then eventually we get to the actual procurement, which replaces other contracts and saves dollars over time.

Mr. CRAVAACK. So you do have something in place already that you can talk to other components to see if you can combine the purchase. Are you saying it is working well at this point?

Mr. NAYAK. It is working well, and we want to do more of it.

Mr. CRAVAACK. That is good to know.

With that, sir, I yield back.

Mr. ROGERS. I think that is the result of the IG report, right? That was one of the focuses you all had, and you are responding to that.

Mr. NAYAK. Only detection equipment. We had the program up and running. Their recommendation was to use the program specifically for detection equipment. But we have 42 initiatives that already on-going. In other words, canines we figured out on our own.

Mr. ROGERS. Mr. Davis, do you have any additional questions?

Mr. DAVIS. No.

Ms. JACKSON LEE. I do. I just want to make a comment. I just have a comment. So are you getting ready to do your questions?

Mr. ROGERS. Mr. Benda, you invite industry to bring its technologies to TSL at a fairly developmental stage for testing and for guidance on how their detectors can be improved to meet TSA needs. There is no cost to industry for this service, which can go on for months or years, which means you essentially provide a free research and development feedback resource. What are your perceptions as to how well industry appreciates this resource and is there anywhere else they can go for this kind of testing and evaluation service?

Mr. BENDA. Sure, sir. I appreciate the question.

I think industry, the level of appreciation on the resource, it depends on whether they have gotten certification or qualification approval from the labs. So I think it all depends on where you are sitting.

I do think it is an unusual aspect that the Transportation Security Lab offers, supported by the HSARPA, which I run, to work with them to move technologies through the process. We use what is called a collaborative research and development agreement, CRADA. It is a public-private partnership. Basically we think we need to improve that process, and I have been working with Susan and her staff as well as my explosive division director on how we can do that, as well as Robin's chief technology officer.

Because it shouldn't take years, sir. If you are coming in, and we need to make up a better assessment early on, do we think this technology can meet the TSA requirements, and, if it can, we need to spend some time on that. But we need to put some bounds on it. We need to understand what market this technology can fill, what existing technology has filled that market already.

We can't necessarily fund every technology that can eventually fill it or subsidize them with Government money. So if that market is already being filled adequately by an existing technology, the

Government shouldn't subsidize them, as I imagine you would agree.

So we want to look at that. We want to develop a process that is in place. We want to scope that support and make sure that, instead of taking years—no one should take years—but expedite that process to be a matter of months and make sure that those that have the best value come first.

Mr. ROGERS. Great. I note that TSL has recently improved its process for working with private sector through cooperative research development agreement which allows the maximum amount of information sharing to companies with clearances, even if they do not have a procurement contract. This sounds to me like a real DHS success story. Tell me how the agreement will help further industry's goals to provide needed technologies and grow their businesses.

Mr. BENDA. Again, that CRADA process is what you are referring to. The challenge that some small businesses have, as you have said, they can't get a clearance unless they have a contract in place. The CRADA allows us to use what is called, in technical parlance, a DD–254. We leverage a DOD process in place that says there is an existing agreement with the Government and allows us to share classified information with them because it is in the best interests of the Government, which also turns out to be in the best interests of the business. So when those processes are in place, they get a better understanding of what those requirements are.

As you are certainly aware, we can't share with everyone what those technical requirements are because we can't let those become public.

But the CRADA, once that is in place and once that sharing is in place, we are going to do a better job. The big process improvement we are going to make is that scoping up front and putting more documentation in place, both on the front end and the back end of the process. So people will understand what we are going to do in the CRADA. We will be very clear on our requirements, very clear on what we what we hope to achieve, very clear on the time lines, as well as at the end of the process in terms of what we have gotten out of it.

Mr. ROGERS. Great.

We have Susan Hallowell here, and I have two questions for her. Susan, if you would come up to the microphone.

Once the testing and evaluation is complete at TSL in New Jersey and including an additional stint in Florida for homemade explosives testing, I understand that machines are then sent to Washington Reagan Airport for initial field testing for liability and maintainability and then on to airports across the Nation for full-scale operational T&E.

Some in industry balk at this prolonged process, which can take months, if not longer, and which requires shipping machinery across the Nation. They cite a better model in some countries in Europe where private companies are contracted to do the certification and they do it more quickly and efficiently than the Government can. We have also heard that delays sometimes happen because of simple things that are easily fixed, but the process requires a complete redo.

Dr. Hallowell, can you please tell me whether and why every step of this process is necessary to ensure the efficacy of the technology that TSA is purchasing?

Ms. HALLOWELL. Thank you, Mr. Chairman.

Mr. ROGERS. Just turn the microphone on.

Ms. HALLOWELL. Actually, that overall process is held by TSA, so that is more of a TSA issue. The actual certification we do at the laboratory is just one small cog in a larger process. So I would put that question to Mr. Kane.

Mr. ROGERS. Okay. Mr. Kane.

Mr. KANE. Yes, sir. Many of the things you just talked about, while they are virtually all true, as I understand what you just said, that is our process, much of which is required by the acquisition guidelines that we have to follow, and it is put in place to prevent things that have happened in the past such as the puffers.

So our integration facility at Ronald Reagan is to get into a near-operational environment for equipment before we actually put it out into airports, and they have to experience what the real results are, and we find out things that aren't explosives detection.

What TSL does, not exclusively, but what they do, their large expertise lies in explosive detection and qualifying that, yes, it can detect the things that we need. There are many other requirements that machines have to meet to operate in the airports, as you know and as we have experienced in the past.

So we run this whole process. It does take time to run a test at the TSL, to run a test at our facility at Reagan, and then to do actual field testing. But that is a rigor that we want to put into this process so when we are making decisions on hundreds of millions of dollars that we are making the right decisions.

Mr. ROGERS. Okay. Then I won't ask this follow-up question, since it was Mr. Kane.

Mr. Edwards, how much money do you think the Department could save if it used strategic sourcing to acquire all of its detection equipment?

Mr. EDWARDS. Thank you, sir.

We looked at just the detection equipment itself, and if they had used strategic sourcing they could save $170 million.

Mr. ROGERS. Excellent.

What steps do you recommend be taken to standardize the inventory technology so that all components in the Department are aware of what other components already have and are purchasing?

Mr. EDWARDS. Strategic sourcing is known for best practices. It results in efficiencies, economies of scale, and volume buying. It also reduces overhead costs for procurement.

For instance, in the detection equipment, if you are buying—every component is buying different types, then you are going to increase the maintenance costs, the training costs. So if components work together and buy these—and have less number of the different types, then there is going to be volume savings.

It also is good for the industry because you have a single point of contact that you can go to. They can just go to the Strategic Sourcing Program Office and the vendors can just go to them, rather than going to the different components.

Mr. ROGERS. Dr. Nayak, do you want to comment on that?—or you don't have to.

Mr. NAYAK. I think he accurately covered it.

Mr. ROGERS. That is great.

The Chairman now recognizes the Ranking Member for any further questions.

Ms. JACKSON LEE. Thank you, Mr. Chairman.

I will be concluding on this note. I am not sure you are having another round.

Mr. ROGERS. I have more, but I am going to give them in writing.

Ms. JACKSON LEE. Okay, and I am going to do that as well.

But let me ask this question of Mr. Kane, and I am going to say to you that I would like to have a more extensive answer in writing. So that means a period of time that you may take that you can abbreviate.

One of our increasing concerns across the Federal Government is the possibility of theft of large volumes of sensitive information contained in mobile data storage devices. What is the DHS policy concerning what portable data is encrypted and are there currently any DHS processes where portable data is not encrypted?

Mr. KANE. Okay, and I will be happy to take that one back for the record. I am not the expert in this.

But all of our portable devices, the CIO imposes requirements for encryption on those devices, and they actually have an approved list of those that we are allowed to use. So I can't just take any memory stick out and put it in my computer. It has to be an approved memory stick that I can use today.

Ms. JACKSON LEE. Mr. Chairman, I would almost say that this would warrant a classified briefing. There are so many various portable devices going around in many people's hands, and this is not a question of the integrity of the staff of DHS as much as it is the need to be secure. So I am going to submit this letter into the record—I am sorry, excuse me—this question into the record for a more extensive response.

Let me quickly go to Mr. Edwards.

TSA has confused purchases and acquisitions. There was some detection that IG released a report indicating that. Can you please explain the difference between an acquisition program and procurement and explain why additional costs may have been incurred by TSA in this case?

Mr. EDWARDS. Thank you, ma'am.

A simple procurement is a simple one-and-done action. For example, if you are buying paper, it can be managed by a single procurement. In contrast, an acquisition program is a more complex process that includes planning, purchasing, maintaining, managing, and overseeing an acquisition of goods and services. High-value items are normally usually acquired through an acquisition program.

For example, if the Coast Guard is buying a Coast Guard cutter, it is managed and overseen by an acquisition program. In this case, what we are talking about in our report is TSA managed the renovation of a 12,500-square-feet warehouse as an acquisition program rather than using it as a simple procurement. By treating that relatively small renovation project as an acquisition program,

TSA increased administrative costs and also due to additional personnel and also overhead costs it incurred because of the oversight and internal controls required for an acquisition program.

Because of this confusion incurred by TSA and other components, we recommended to the Department that they double up the decision matrix tool about whether acquisitions should be managed as a simple procurement or an acquisition should be managed as an acquisition program. So the Department agreed to our recommendation and is in the process of implementing it.

Ms. JACKSON LEE. I think that is a great improvement. Thank you very much.

Mr. Chairman, I just wanted to put two issues on the record. I made a somewhat humorous comment earlier, but I wanted to clarify two things.

One, I wanted to conclude by thanking the witnesses and acknowledging to Dr. Nayak—I wanted to acknowledge the seemingly celebratory numbers that you are citing relating to your outreach to small businesses. I think whenever an agency comes forward, we should say thank you, and I want to thank you for what appears to be very positive numbers.

I would only comment that I want our reach to be not only small businesses but the non-sophisticated small businesses that may be in States far and wide that don't have the experience that some who are in tune to working with the Federal Government—and if you live in this area long enough, you know that there is a constituency of small businesses, no discredit to them, that work with the Federal Government. That is their work. They know how to do it. That doesn't mean they are in Alabama. It doesn't mean they are in Texas. It doesn't mean they are in Illinois. It doesn't mean they are in Minnesota and various other places. I want us to get our numbers where we show that demographic or that geographic, excuse me, diversity, so that when we go home, wherever we might be, there will be someone who says that they received some information on that opportunity.

That is the first thing, Mr. Chairman.

The second thing, as I sit in this committee—and I will be brief—I think they pointedly put that picture, Mr. Chairman, in front of the Chairman and the Ranking Member, straight ahead, if you look and you will see it on the wall, for a reason, for us to know our purpose and our cause here. So I am serious.

I want to publicly apologize for the actions of one TSA inspector that violated the trust of this work and violated a traveler's personal belongings. In this instance, it was a woman, and in this instance it probably would create humor, but I didn't think it was funny.

So I am going to ask that we will perspectively have a meeting, we are overdue for a meeting with Mr. Pistole on a number of issues. I count that on the issue of professional development and training. I have been a champion of TSA in terms of its workforce for training, professional development, the ability to ascend to a higher position, and I am very disappointed in that particular act that occurred about a week or so ago.

The second aspect, Mr. Chairman, that I would raise a point with is seemingly the confusion—I have not gotten a final report on the

question asked as to whether or not TSA checks on checked weapons. As you well know, you can check a weapon in your suitcase, and I think the public is a little aghast that we have no record. I think we thought we were doing everything that we could, and I think there was a question of whether they were loaded or unloaded. But the answer came that that was not TSA's responsibility to determine that in a suitcase, lodged in a suitcase.

I think we need to change that policy and there needs to be a way of determining what ammunition and weapons are in checked luggage. Our first line can be domestically versus internationally. We can maybe start with that, and I would like for us to take up that issue. That is not an NRA issue.

Mr. ROGERS. Where did you hear that? I went to the Atlanta Airport 2 weeks ago, not a flight, just to go over there and let them take me through their screening systems. One of the areas they took me through was where they screen the baggage. They do require that the gun be unloaded and it be in a box that is sealed. If the passenger doesn't disclose to you that they have got one in their bag, what they do, they will tag the bag so that you know he has disclosed it or she has disclosed it. But if not, they do run it through a scanner where they look for the gun. They allow you to have it, but it has got to be unloaded.

Mr. Kane, am I stating that right?

Mr. KANE. Sir, just to clarify, there are requirements for how you have to check a firearm. Our detection technology does not detect firearms in checked baggage.

Mr. ROGERS. Well, when I went through Atlanta, they said it did.

Mr. KANE. If you are looking visually, you may see it on a visual image. But as a general rule, especially in our big in-line systems, this equipment is designed to detect explosives, and it does not detect a firearm.

Mr. ROGERS. Well, I agree with the Ranking Member. We need to find out more about this.

Ms. JACKSON LEE. I think that would warrant a classified briefing.

Mr. ROGERS. I agree.

Ms. JACKSON LEE. Because we don't want to expose it. I thank Mr. Kane for his honesty in clarifying it for both the Chairman and myself. So I would list that as an item that is left with questions, and I believe it is appropriate for us to handle that in a manner appropriately.

So, Mr. Chairman, because of the burden of our responsibility, I just want to make sure that we cross every t and dot every i, and I would look forward to pursuing those issues.

Mr. KANE. Can I offer just two comments, Mr. Chairman, if I could?

First, on the incident with the officer, I would just like to be on the record as saying TSA took that very seriously as well and instituted—this is a discipline issue and we clearly would institute a disciplinary process swiftly in that case, in all cases.

Second, a firearm in a bag that you don't have access to is a much different proposition than a firearm in a carry-on bag. I just would like to note that. There are reasons for some of the differences we have.

Ms. JACKSON LEE. Oh, I fully understand that, but I think we need to get it clarified. As they say, that building reminds us that something can always go wrong, and that is the only reason I brought it up.

Mr. ROGERS. I just want to make sure I am clear on that. I understood when I was seeing that in-line process that it could determine a gun. We will follow up with you all and get somebody in that can help us in a classified setting explain the technology and its capabilities and limitations.

I, first of all, want to thank all of you. I know we are over time, and I am not going to drag this out. But I have got a ton more questions. But what I am going to do is submit them to you in writing. The record will left open for 10 days, so if you can get us a reply to those, it will be very helpful to us.

I do want to let you know I wanted to have this hearing on the record to raise a lot of these questions and give you an opportunity to offer your thoughts. But I would like to have a chance to sit down with you all again and the Ranking Member and let's just kind of talk through more of these for our edification in a more informal fashion. Because you all obviously are a great resource for us to draw on, and you have got a lot more that I would like to know.

But I do think that I have gathered from your comments here today that you all are working on what I want to see, and that is more transparency and more interaction with the private sector as to how we can in partnership achieve our security goals, and that is encouraging. So I am very happy about that.

The one thing I did want to ask, and it follows up to what the Ranking Member was pursuing, and that is, as you go forward with these industry days, and this will particularly be for Mr. Benda and Dr. Nayak, and you look at this new and improved version, how do you outreach to small businesses? How do you get the word out that you are inviting their participation?

Mr. NAYAK. Well, for us, it is very simple. We use the open announcement with what is called Fedbizopps. So it is an announcement to the world, and that is standard. That is what everybody who does business with the Government knows to go to.

Mr. BENDA. We follow the same process, sir. We will put out a request for information. We will use Fedbizopps.

Mr. ROGERS. Okay. Do you pretty much count on the their industry associations to kind of spread that word after they get the Fedbizopps release?

Mr. NAYAK. You know, there is about five or six. I noticed you had participation from one in a previous hearing. They cover a subset of the universe. They do have large and small business. But they are not the universe. So we do work very closely with them. Quite often—I speak at literally every one of the associations. But, again, we have to use something that goes out to the world.

I mentioned an industry advisory council. Again, whatever we create has to be very open, very transparent, and that is the trick to sort of figuring this out. But we are working with those associations as well as others to figure it out.

Mr. ROGERS. Well, you know, I talked with the Ranking Member about this. I have been Chairman of this committee now for almost

a year, and I didn't know what fbo.gov was until 3 days ago as I prepared for this. Trust me, I am a low-tech fellow. I worry like she does about people who aren't sophisticated but have some contributions they can make.

One of the things I am going to be doing is setting up a Transportation Security Caucus, and the Ranking Member has already indicated her desire to participate in that. We want to work with you all about some ideas about how we can stir interest out there and get folks who may not be computer-sophisticated aware that there are opportunities here and we want their participation.

I thank all of you. This has been a very worthwhile hearing, and we are now adjourned.

[Whereupon, at 4:18 p.m., the subcommittee was adjourned.]

APPENDIX

QUESTIONS SUBMITTED BY CHAIRMAN MIKE ROGERS FOR NICK NAYAK

Question 1a. You have stated that one of your strategic objectives is to establish quality communication between industry and DHS. One way you aim to accomplish this is to require acquisition planners to develop vendor engagement strategies for major acquisitions that may include activities such as Industry Days or conferences; the "DHS Acquisitions Planning Guide" was just amended for this purpose.

Do these requirements apply to all acquisitions planners across the Department, even within components like TSA that have their own acquisitions office?

Answer. Response was not received at the time of publication.

Question 1b. Do you expect DHS and TSA to put into effect a similar planning model to DOD's, whereby multi-year acquisition plans are provided to the vendor community to help better align private sector R&D with the needs of DHS and TSA? It seems to me that a 5-year budget estimate included in TSA's annual request to Congress would go a long way toward this end.

Answer. Response was not received at the time of publication.

Question 2. This committee has been spending some time, including through other hearings, looking at how the Department utilizes technologies that have been deployed in other agencies, such as the Department of Defense. One of the greatest tools at our disposal to save the Department needed dollars is to leverage existing technologies.

Are existing technologies always considered when developing acquisition policy at the Department? If not, what one policy change would have the most impact on enhancing the Department's ability to effectively leverage emerging technology?

Answer. Response was not received at the time of publication.

Question 3a. The importance of establishing realistic and risk-based requirements, and sharing them with the vendor community as early and as much as possible, cannot be overstated.

Do you feel that requirements should be primarily based on mission needs, or on the existing capabilities of commercial technologies that vendors currently have?

Answer. Response was not received at the time of publication.

Question 3b. What is the proper role for vendors in setting technology requirements?

Answer. Response was not received at the time of publication.

Question 3c. Mr. Kane, as a follow up, what process does TSA follow to establish performance requirements for technologies it seeks to procure? And how does TSA use information from the scientific community to inform the development of key requirements?

Answer. Response was not received at the time of publication.

Question 3d. What options are open to the Department for establishing rigorous requirements that are threat- and risk-based, and for which there is cross-component input?

Answer. Response was not received at the time of publication.

QUESTION SUBMITTED BY RANKING MEMBER SHEILA JACKSON LEE FOR NICK NAYAK

Question. In your testimony, you assert that the Department has made progress in providing better training and certification for several acquisition career fields. What challenges, if any, have you faced in increasing training of DHS program managers? How have improvements in training and certification lead to a more effective acquisition process?

Answer. Response was not received at the time of publication.

QUESTIONS SUBMITTED BY CHAIRMAN MIKE ROGERS FOR ROBIN E. KANE

Question 1a. TSA has recently undertaken a structural reorganization. Mr. Kane, you now lead the Office of Security Capabilities. TSA has stated that under the new system, all of the former Office of Security Technology and elements of the Office of Security Operations and the Office of Intelligence are grouped together, creating "a single office with responsibility for defining and developing both the security and technology capabilities required to execute our counterterrorism mission" and matching "capabilities against threats to identify and deliver high priority capabilities to the field."

How does the TSA reorganization result in more streamlined development and procurement? Please provide us with some concrete examples of how this works.

Answer. Response was not received at the time of publication.

Question 1b. What is the "Security Policy and Industry Engagement" office responsible for?

Answer. Response was not received at the time of publication.

Question 2a. The joint TSA-S&T aviation security technology strategy states, "To encourage consistent dialogue and proactive involvement with S&T, TSA will produce and maintain technology roadmaps that outline desired capabilities, high-level development milestones and dependencies for major technology products and incremental capability enhancements. Strategy roadmaps indicate key mission capability needs and the TSA efforts to accelerate the development of advanced solutions."

Have these roadmaps been completed and shared with the private sector? If not, when will they be complete and publicly available?

Answer. Response was not received at the time of publication.

Question 2b. Has the strategy resulted in new or improved technologies?

Answer. Response was not received at the time of publication.

Question 3. The "For Official Use Only" version of the joint TSA-S&T aviation security technology investment plan has a time line for achieving specific goals and sub-goals that extends through fiscal year 2014.

Has this timeline been shared with industry? While I'm sure you need to be careful about broadcasting predictions that may change due to emerging threats, by the same token, industry needs some kind of roadmap to strategize and formulate semi-long term business plans.

Answer. Response was not received at the time of publication.

Question 4. The importance of establishing realistic and risk-based requirements, and sharing them with the vendor community as early and as much as possible, cannot be overstated.

What process does TSA follow to establish performance requirements for technologies it seeks to procure? And how does TSA use information from the scientific community to inform the development of key requirements?

Answer. Response was not received at the time of publication.

Question 5a. Goal 4 from your aviation security technology strategy states that TSA is looking to "increase capability to respond to emerging threats through development of flexible security solutions."

Since many of the technologies that TSA acquires are still undergoing additional development, how does the agency ensure that the technologies are improved once acquired?

Answer. Response was not received at the time of publication.

Question 5b. Is it going to become necessary for vendors and TSA to reach an agreement at some point that allows an open, standard data file format that allows TSA to contract out upgrades to the best vendor? Will TSA need rights to the data at some point to allow for true flexibility and efficiency in upgrading its systems?

Answer. Response was not received at the time of publication.

Question 6a. TSL provides a technical service for TSA by certifying equipment that meets its requirements, or determining what equipment does not meet TSA's requirements.

Has TSA ever purchased equipment that did not meet certification standards as tested to by the TSL?

Answer. Response was not received at the time of publication.

Question 6b. Has TSA ever considered using the TSL in a different way, that is, harnessing its decades of experience working with technologies so that TSL is actually involved in the developing of requirements, and not solely testing to them?

Answer. Response was not received at the time of publication.

Question 7a. TSA used to engage in extensive research and development activities. In fiscal year 2006, Congress consolidated TSA's R&D activities with those in the S&T Directorate.

What effect does the separation of research and development activities from acquisition and operational activities have on TSA's ability to adopt new technologies? What benefit, if any, would accrue from transferring back to TSA its research and development responsibilities?

Answer. Response was not received at the time of publication.

Question 7b. After the transfer of TSA R&D activities, TSA and S&T signed a memorandum of understanding regarding the use and priorities of the TSL. How successful is your partnership with S&T regarding use, upkeep, and priority setting for the TSL?

Answer. Response was not received at the time of publication.

Question 8. How does TSA incorporate the results of covert tests into its evaluation of existing technology and future procurements?

Answer. Response was not received at the time of publication.

Question 9a. According to the GAO, the S&T Test & Evaluation and Standards Office expressed concerns about TSA's operational test agent for the Passenger Screening Program. The T&E Office cited the lack of independence of the test agent since the test agent was part of the same TSA office responsible for managing the program. The T&E Office provided an interim approval valid for 1 year and outlined measures for TSA to take to ensure necessary independence.

How has TSA responded to these actions by the S&T Directorate?

Answer. Response was not received at the time of publication.

Question 9b. What advantages, if any, might accrue from establishing a fully independent operational test agent in TSA, the S&T Directorate, or some other part of the Department?

Answer. Response was not received at the time of publication.

Question 10a. The testing and evaluation capabilities that the TSL and the Office of Test & Evaluation and Standards provide are key to ensuring that all machinery purchased by TSA meets its own prescribed standards.

Does TSA leverage these capacities completely? Was that done with AIT?

Answer. Response was not received at the time of publication.

Question 10b. I understand that TSL often evaluates TSA technology, but not always. Why is that, and can you tell me about some technologies that you purchased that were not put through TSL testing?

Answer. Response was not received at the time of publication.

Question 11a. The S&T Directorate has established as one of its strategic goals to leverage its technical expertise to assist DHS components' in establishing operational requirements, and to select and acquire needed technologies. This requires the S&T Directorate to have a firm understanding of the technical and environmental constraints of the DHS components' operations and a close working relationship between S&T Directorate program managers and DHS component decision makers.

In your experience, what activities, both formal and informal, has the S&T Directorate taken to increase its role in TSA's establishment of operational requirements?

Answer. Response was not received at the time of publication.

Question 11b. How successful have these activities been, and what results have come from them?

Answer. Response was not received at the time of publication.

Question 12. This committee has been spending some time, including through other hearings, looking at how the Department utilizes technologies that have been deployed in other agencies, such as the Department of Defense. One of the greatest tools at our disposal to save the Department needed dollars is to leverage existing technologies.

Is there a process in place to evaluate the most advanced and innovative technology that may be in use elsewhere, and could now be utilized at TSA? And are existing technologies always considered when developing acquisition policy at the Department?

Answer. Response was not received at the time of publication.

Question 13. Is TSA satisfied with its current process for paying for technology procurement (purchasing technologies subject to yearly appropriations), or are there other models it is looking at?

Answer. Response was not received at the time of publication.

Question 14a. In October 2009, GAO reported that TSA had not completed a cost-benefit analysis on investments for screening passengers at airport checkpoints because they failed to develop life-cycle cost estimates for these technologies. While TSA has recently developed life-cycle cost estimates, GAO reported that TSA has still not completed a cost-benefit analysis.

To what extent does TSA analyze the benefits of technology acquisitions and ensure that the additional capabilities gained provide sufficient benefits to justify their

significant costs? That is, do you perform a cost-benefit analysis for every acquisition, and at what point in the process does this happen?

Answer. Response was not received at the time of publication.

Question 14b. Does TSA engage its vendors in completing life-cycle costs and cost-benefit analyses? If not, are there changes that should be made to this process?

Answer. Response was not received at the time of publication.

Question 15. Would you consider establishing a technology advisory group made up, in part, of security technology manufacturers? Are there other advisory bodies within TSA on which industry already serves?

Answer. Response was not received at the time of publication.

QUESTIONS SUBMITTED BY RANKING MEMBER BENNIE G. THOMPSON FOR ROBIN E. KANE

Question 1. Over the past few years, TSA has increased the number of Behavioral Detection Officers at airports Nation-wide. Has TSA developed a scientific method for measuring the ability of Behavioral Detection Officers to identify people who intend to commit an act of terrorism or pose a threat to aviation? How many terrorist plots have been interrupted by Behavioral Detection Officers? Without scientific validation or proven results, how can TSA justify the expansion of the number of Behavioral Detection Officers? Does the Department perform covert testing on Behavioral Detection Officers like it does with passenger and baggage screeners?

Answer. Response was not received at the time of publication.

Question 2. TSA recently announced a major reorganization of its components and realignment of certain functions across the agency. How does this reorganization allow for an increase in cost savings associated with administrative and procurement functions? How will the proposed reorganization affect TSA's interaction with S&T and DHS? How will the proposed reorganization affect oversight of the development of new technologies?

Answer. Response was not received at the time of publication.

Question 3. TSA continues to make changes to its process for screening of passengers at airport checkpoints. Does TSA have a plan for ensuring that the use of new technology is integrated into new screening initiatives such as the Precheck program? Also has TSA updated its Passenger Checkpoint Program Strategy to reflect the increased use of AIT, BDOs, and the Precheck pilot?

Answer. Response was not received at the time of publication.

QUESTIONS SUBMITTED BY RANKING MEMBER SHEILA JACKSON LEE FOR ROBIN E. KANE

Question 1. Last Congress, you testified that TSA and S&T have worked on streamlining processes and coordinating effectively with one another. What steps has TSA taken to streamline its relationship with the S&T Directorate and strengthen acquisition and procurement practices with DHS Office of Procurement? Please provide specific examples. Furthermore, can you provide more information on how AIT machines were purchased and vetted by the Department of Homeland Security?

Answer. Response was not received at the time of publication.

Question 2. Recently, TSA purchased 300 AIT machines equipped with ATR software that enhance passenger privacy. Have these enhanced AIT machines reduced delays and wait times in passenger screening? Can the existing 500 AIT units be updated with the new ATR software?

Answer. Response was not received at the time of publication.

Question 3. TSA has announced plans to conduct CAT/BPSS technology pilots to determine the sustainability of technology that would replace the current manual "lights and loupes" method of ID authentication. What challenges has TSA faced with the current "lights and loupes" system? How would CAT/BPSS technology enhance ID authentication?

Answer. Response was not received at the time of publication.

Question 4. TSA has deployed 500 next generation Bottled Liquids Scanners (BLS) to airports Nation-wide. In your judgment, how effective are the next generation BLS units in comparison to the existing BLS units? Does TSA plan on replacing the existing 1,000 BLS units?

Answer. Response was not received at the time of publication.

Question 5. One of our increasing concerns across the Federal Government is the possibility of theft of large volumes of sensitive information contained in mobile data storage devise. What is TSA policy concerning what portable data is encrypted and are there currently any DHS processes where portable data is not encrypted?

Answer. Response was not received at the time of publication.

Question 6. In October 7, 2011, the President issued an Executive Order directing Federal agencies to better safeguard classified information, to set up internal audit systems, and to make sure that reluctance to share critical intelligence in the aftermath of the Wiki Leaks exposure does not hamper collaboration across agencies. A component of the Executive Order makes individual agencies primarily responsible for securing the information they obtain and share. Has DHS given consideration as to how this order affects them and how will they go about evaluating possible solutions?

Answer. Response was not received at the time of publication.

QUESTIONS SUBMITTED BY CHAIRMAN MIKE ROGERS FOR PAUL BENDA

Question 1. The TSL cannot necessarily relay to industry the classified technical requirements to which it is testing.

Do you feel that the Department is sufficiently transparent in relating requirements for testing? Is the new CRADA that was described in your testimony sufficient to solve this problem?

Answer. Response was not received at the time of publication.

Question 2. The TSL provides testing services for agencies other than TSA, such as the U.S. Secret Service, the U.S. Coast Guard, and Customs and Border Protection.

Have you found that these components have similar needs to TSA, which could perhaps benefit from joint requirements setting or strategic sourcing?

Answer. Response was not received at the time of publication.

Question 3. The Government Accountability Office recently released a report describing TSA's failure thus far to implement 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 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. Response was not received at the time of publication.

Question 4a. For many years the Science and Technology Directorate has invested in technology development aimed at detecting explosives in the transportation context. MagViz technology, for example, has received funding since at least fiscal year 2007. Under Secretary O'Toole has previously testified that the S&T Directorate is now attempting to develop a "checkpoint of the future" that can integrate many of these technologies to provide a multi-faceted detection capability.

How would you characterize S&T Directorate support for these technologies? Are they research or development projects? What is the expected time frame for delivery of a final product? Of the technologies under consideration for integration into the "checkpoint of the future," how many of them are mature and have undergone successful developmental and operational test and evaluation?

Answer. Response was not received at the time of publication.

Question 4b. Historically, the S&T Directorate has developed technologies to be transitioned to end-users rather than systems that incorporate those technologies. How significant a role will the S&T Directorate undertake in systems integration? With respect to the "checkpoint of the future," what challenges do you envision in attempting to integrate these technologies together into a single system?

Answer. Response was not received at the time of publication.

Question 4c. The S&T Directorate has established the Apex projects starting in fiscal year 2012. The "checkpoint of the future" is not one of them, although the impact of integrating and improving technologies so widely deployed at domestic and international airports provides the opportunity for substantial risk reduction and savings through operational efficiencies. Why has the S&T Directorate not designated this as an Apex project? What discussions has the S&T Directorate had with TSA leadership to identify whether this should become an Apex project?

Answer. Response was not received at the time of publication.

QUESTION SUBMITTED BY RANKING MEMBER BENNIE G. THOMPSON FOR PAUL BENDA

Question. The Under Secretary for Science and Technology has stated that the S&T Directorate should play a greater role in the acquisition of technologies by DHS components. Would an expanded role for the S&T Directorate in the acquisition of technologies by TSA increase the likelihood that acquired technologies will succeed in the field? Would such an expanded role for the S&T Directorate result in a more

cumbersome process for private-sector vendors seeking to work with the Department on their security technologies?

Answer. Response was not received at the time of publication.

QUESTION SUBMITTED BY RANKING MEMBER SHEILA JACKSON LEE FOR PAUL BENDA

Question. How did the Detroit Flight 253 incident and the discovery of the Yemen cargo plot impact priorities and planning at the Transportation Security Lab and throughout the Science and Technology Directorate? How will the proposed budget cuts affect that work?

Answer. Response was not received at the time of publication.

QUESTION SUBMITTED BY RANKING MEMBER SHEILA JACKSON LEE FOR CHARLES K. EDWARDS

Question. In your testimony you state that while DHS has taken steps to improve its acquisition oversight processes and controls, additional areas for improvement remain. What is the single most important improvement you believe needs to be implemented? Does the Department have a plan in place to implement the needed improvements?

Answer. The Department of Homeland Security (DHS) continues to face challenges associated with implementing a fully integrated acquisition function. A successful acquisition process requires an effective acquisition management infrastructure. Acquisition management is a complex process that goes beyond simply awarding a contract. It begins with the identification of a mission need; continues with strategy development, while balancing cost, schedule, and performance; and concludes with contract closeout. It also includes managing operational and life cycle requirements, to include formulating concepts, assessing tradeoffs, and managing programs risks. We have performed various audits over the years that have identified the Department's improvements and challenges, which we outline annually in the *Major Management Challenges Facing the Department of Homeland Security* report. The one recurring need over the last several years has been an emphasis on further development and refinement of oversight and internal controls.

The Department's most recent major management challenges report, OIG–12–08, dated November 2011, identified several areas which needed improvement. The Department concurred with our assessment and continues to make refinements and improvements. However, to address your specific request we refer you to our March 2011 audit report, *DHS Department-wide Management of Detection Equipment,* OIG–11–47. In this report, we determined that the Department could improve its management of detection equipment by applying the principles of strategic sourcing. Strategic sourcing requires that the Department standardize equipment purchases, identify common mission requirements among components, and develop standard data elements for managing the inventory accounts.

Although we made these recommendations to address improving the Department's management of detection equipment, the strategic sourcing/logistics concepts imbedded as best business practices can be applied across the Department. These best practices provide for efficiencies of purchasing scale; serve to create greater competitive opportunities for more businesses, both large and small; and establish a foundation for standardization and transparency. The Department is in the process of implementing these recommendations by establishing a Steering Committee and a commodity working group that has begun to identify specific missions and needs. We will continue to monitor the progress of the Department in its actions to implement these recommendations and will encourage its leadership to apply these principles across its components and commodities.

We have also continued to audit the Department's acquisition process, both system-wide and in specific component programs, and we plan to release those reports in the second quarter of 2012.

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