

**Written Testimony**  
**Mark Laustra**  
**Senate Commerce Committee**  
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**“Stakeholder Perspectives on Improving TSA for the Security of the Traveling Public”**

Chairman Blunt and members of the Subcommittee thank you for the opportunity to share my thoughts on potential areas of improvement in technology research, strengthening the TSA test and evaluation process, and bringing clarity and stability to technology acquisitions. Industry stands ready to work with you and the TSA in 2017 to improve the security and experience of the traveling public.

I am Mark Laustra, Vice President, Global Business Development and Government Relations testifying on behalf of the Analogic Corporation; a public company based in Peabody, Massachusetts that employees over 1,700 mostly highly skilled employees that are engaged in the design and manufacture of high tech components for the medical and security screening industry. Our technologies can be found in life-saving equipment such as CT scanners, MRI machines and state of the art Ultrasound systems. We are also a pioneer in security CT equipment, and since 9/11, our technology can be found in many of the deployed Explosive Detection Systems (EDS) as our nation achieved 100% screening of checked baggage as required by the Aviation and Transportation Security Act of 2001. These EDS machines capture millions of data sets of each bag and use high powered algorithms to automatically detect explosives within seconds. We are now developing a second generation checkpoint CT system for the purpose of automatically detecting explosives in passenger’s carryon bags.

**TSA LEADERSHIP**

My testimony today will largely focus on TSA’s five-year acquisition plan requirements of the Transportation Security Acquisition Reform Act (TSARA – P.L. 113-245), and Congress’s important role moving forward. However, first and foremost, any meaningful result today and in the future will only be achieved when industry has an active and purposed seat at the table with government – not simply to receive information, but to generate a constructive dialogue on the threats we face and vulnerabilities ripe for exploitation by our adversaries. This will enable manufacturers to align private sector technology research and capabilities with current and future threats, as well as to ensure a viable domestic security technology industrial base is maintained.

Industry has seen a laudable increase in engagement by TSA with the industry. We hope this trend continues under the new administration and especially since TSA has reorganized critical departments and job responsibilities. We are optimistic TSA understands how unpredictable purchasing cycles and multi-year timelines for equipment development, testing and qualification negatively impact both government and the industry.

**TSA ACQUISITION PLAN**

TSARA required TSA to develop a 5-year technology acquisition plan. Released in August 2015, the *Strategic Five-Year Technology Investment Plan for Aviation Security* (henceforth referred to as the “Five-Year Plan”), was a positive step forward in accountability, cross-jurisdictional collaboration and industry engagement. An essential document for industry planning, the Five-Year Plan provided some visibility into TSA’s schedule for replacement and upgrades of existing equipment, and projected future capability needs. But it was just a first step. Industry needs a more precise roadmap to know where and when to invest. Ensuring our R&D efforts focus on the capabilities that will meet TSA priorities and address emerging security threats is critical to protect the citizens of this country. Greater partnership between TSA and industry will only help with this process.

The Five-Year Plan can be leveraged to vastly improve TSA’s acquisition process and, ultimately, the security of our aviation system. This Committee is in a unique position to monitor progress TSA is making on acquisition reform. In fact, the TSA was directed by Congress to update the Plan every two years, and a new report is due to Congress this summer. This is an excellent opportunity to for the Committee to ensure TSA is making necessary changes to: streamline and strengthen the test and evaluation (T&E) process; align budget requests to identified requirements; provide clear and consistent details on the threat profile to ensure industry is prepared to respond and TSA is making the right investments; and ensure meaningful engagement with industry.

## **PLAN DETAILS**

In the update, we encourage Congress to request more specific dollar allocations and investment detail from TSA tied to particular equipment type. The 2015 Plan generically suggests a \$3.6 billion investment over the five-year period but fails to align those expenditures along actual programs, projects and activities. Further, there was virtually no mention of “new” acquisition as opposed to recapitalization. Finally, the acquisition plan should be based on the true needs of the TSA from a technology capabilities standpoint, not an expected budget framework.

Since its release, industry has been challenged by constantly shifting and changing funding levels for equipment, particularly for the checkpoint program. For example, the Plan stated that the TSA intended to purchase 897 Enhanced Metal Detectors for checkpoint screening with FY16 funds. The Five-Year Plan also indicated the TSA did not plan to purchase any Boarding Pass Scanners (BPS) or Credential Authentication Technology (CAT) systems. However, the FY17 TSA budget justification materials indicated that the TSA intended to use FY16 enacted funds to purchase 625 CAT machines and 175 BPS. Similarly, the FY17 request indicates that no EMD will be procured in FY16. Late last spring the TSA announced that it was not moving forward with the procurement of 296 AT-2 machines in FY17.

The TSA has provided justification for shifts in the figures provided in the Five-Year Plan versus actual procurements. However, these constant shifts have challenged industry in developing their business and staffing plans. Industry needs more certainty that the figures contained in the

Five-Year Plan update are reliable and will stick, and at a minimum that Congress and industry be advised right away if any changes occur.

Overall, industry is concerned about future recapitalization plans outlined in the Five-Year Plan that consist of peaks and valleys on a year by year basis. This makes resource allocation and staffing extremely challenging for manufacturers. A more consistent, level spend plan spread out over the five years would enable original equipment manufacturers (OEMs) to maintain consistency in staffing and manufacturing plans.

### **T&E PROCESS REFORM**

TSARA is an important first step to meaningful reforms, but while plans are great, it is the implementation of those plans that determines ultimate success. TSA outlined a number of initiatives underway in the initial Plan that seek to improve the acquisitions process, particularly relating to the development, testing, and qualification of security equipment. While TSA has done a good job of providing transparency into the process for industry, the fact remains that under the best scenario, it can take three years or longer to navigate a piece of equipment through the T&E process. While the bar must be high, this process impacts innovation, competition, improved security and efficiency, as both the government and industry expend undue time and resources navigating a complicated process. Industry encourages the TSA to outline the specific steps in detail that have been taken to reform the testing process in the Five-Year Plan update.

Perhaps the single, most critical element for ensuring a successful test and evaluation process is the thoughtful development of equipment requirements. TSA and industry have struggled over the years with requirements that number in the hundreds, many of which have little relevance with the core detection and operational performance of the equipment. There is also the challenge of constantly shifting requirements, which cause significant disruptions in the testing process. Industry has urged TSA with each procurement to identify the handful of solid, core requirements to test capabilities. Industry again suggests the TSA outline how its reorganization will facilitate the development of better requirements to ensure a more efficient T&E and overall acquisitions process.

In summary, shortening and streamlining equipment testing and collaborating with industry to identify recurrent chokepoints in the process and develop solutions would go a long way to getting newer, more advanced equipment into the field. It will provide a higher-degree of certainty to industry that the process isn't a series of roadblocks, but important, measurable checkpoints on a linear road. It will also help to foster more competition and effective use of government and industry resources.

### **S&T INVESTMENT & INTERAGENCY COLLABORATION**

The TSA's Five-Year Plan projects a more integrated engagement with the DHS Science & Technology Directorate. We urge the Committee to require more detail in the update to the Five-Year Plan to include specific examples and plans of S&T investment directly tied to fulfilling TSA identified capability gaps and future requirements; the subsequent transition of TSE from development to the T&E stage; and eventually acquisition. There are substantial opportunities to improve coordination between S&T and TSA to ensure the development of newer, higher-capability equipment that can be transitioned to a more effective testing process and fielded more expeditiously.

Industry supports the thoughtful investment of research dollars, provided it is tied to addressing real threats identified by TSA as a capability gap and with an eye toward eventual and realistic procurement either by the government or as a requirement of government (as in the case of air cargo). Former Secretary Johnson's efforts to better align S&T Integrated Product Teams (IPT) under the Unity of Effort Initiative was a welcome first step. TSA needs to have a prominent role in the IPT effort, and ultimately should have a lead role in identifying key R&D needs and activities, as they are responsible for acquiring and operating equipment that will meet new and evolving threats. Further, industry input should be solicited early on in the process to ensure research goals align with achievable, cost-conscious results.

#### **LIFECYCLE**

Along with the T&E process and up and down procurement cycles, there are other notable challenges for industry. In 2014, with no industry input, TSA made a decision to expand the projected lifecycle of EDS equipment from 10 to 15 years. This had significant implications on company manufacturing and staffing plans. While the justification by TSA was that detection capabilities for known threats continues to be sufficient, the results are that future threat research and response is stifled and next-generation detection and high-speed capabilities are delayed.

The lifecycle decision may have a very real budgetary and operational impact for TSA, as the ability to maintain and keep equipment fully operational and performing its mission after 10 years of service is increasingly difficult. This means more patches, difficulty finding replacement parts, more service calls, antiquated operating systems, and less efficiencies. Further, trying to bring 10-15-year-old equipment into the Age of the Internet of Things is almost impossible as the equipment was designed and built to requirements that never envisioned cybersecurity, Internet connectivity or data conversion capabilities.

Congress should closely watch TSA lifecycle equipment determinations for both delayed security impacts, operational cost increases and the very real implications for a viable domestic security industrial base. At a minimum, pushing equipment approval timelines to the right delays the next generation of equipment with increased capabilities, hinders current performance and stifles innovation.

A market environment that engenders innovation is our best defense against improvised explosives and thwarting transportation threats. Certainly intelligence is key, but when this fails,

if we are not encouraging technological innovation and next-generation investment, we will lose not only our technological edge, but the industrial base that goes with it.

### **OPEN ARCHITECTURE**

Related, the Five-Year Plan touches on a desire by TSA to move to a networked system of equipment, or as former Administrator Neffenger referred to, a “system of systems.” A key component of this end-state is an open architecture which functionally seeks to better integrate technology applications and apply security countermeasures, “at the system level rather than the component level”.

Industry appreciates the discussion provided in the initial Five-Year Plan on this system of systems approach and recognizes the security proposition of data-sharing. However, industry remains skeptical of this initiative without greater transparency on what could be a significant business disruption and potentially impact security efficacy. With a goal of implementing this concept within the next 5-10 years, the constructive engagement with industry right now is vital.

Industry encourages caution and thoughtfulness in an effort that appears to seek uniformity, commonality, and standardization amongst the various TSE, which could ultimately discourage the drive for innovation and newer capabilities. While industry supports the concepts behind risk-based, layered security, potentially surrendering intellectual property and company-sensitive algorithms developed through tens of millions of dollars of private sector investment generates another set of risks, including the potential degrading of the competitive nature and vibrancy of the industry. We look forward to discussing this in more detail with TSA in the future to reach a desired state of better capabilities and integration, while maintaining a viable industry base.

### **TRANSPORTATION SECURITY EQUIPMENT FUNDING**

As mentioned in the Five-Year Plan, TSA is transitioning into a technology sustainment mode focusing on recapitalization of over 2,400 pieces of equipment that are reaching their end of life over the next five years. While process is key, it is also absolutely critical to ensure that recapitalization of security equipment is fully funded to keep our transportation system safe and the industry viable.

Industry is grateful to Congress for its leadership in fully funding the FY16 DHS budget request for TSA Checkpoint Support and EDS Procurement/Installation. We encourage the Subcommittee to work with your colleagues to continue this trend while reducing the bureaucratic barriers for innovation and deployment.

This Committee is encouraged to require future TSA budget documents to allot specific funding amounts to various technologies within the Checkpoint Support account and insist the newly revised Five-Year Plan provides a lookback on actual equipment purchased during the preceding three fiscal years. Because Checkpoint Support funding is not delineated to individual equipment types, industry has had difficulty ensuring federal funds are truly reaching the intended target

and consistent with previous documents. Further, previous EDS procurements have been significantly delayed or cancelled after significant vendor investment. Congress should insist on an accounting for these unspent funds and ensure they are carried over EDS replacement only.

These details would go a long way to informing Congress on the true TSA operational equipment need as opposed to budget constrained funding requests.

### **Industry Recommendations to Improve TSA Wait Times**

Industry supports common sense solutions to help alleviate passenger wait times at screening checkpoints, both now and into the future. While short term fixes were necessary to address wait times last summer, the back-up at security checkpoints indicates deeper systemic issues that require sustained attention. The International Air Transport Association (IATA) predicts that the number of air passenger journeys globally will increase by four percent on average per year until 2034, more than doubling the overall number of trips taken as of 2014. So while alleviating the immediate pressure on the checkpoint screening process is a necessary objective, without turning towards medium and long term solutions, a piecemeal approach will only mask underlying issues. To that end, we suggest TSA and the Congress consider the following action items:

#### **1) Develop and Implement an R&D Checkpoint Investment Plan:**

We support former DHS Secretary Johnson's announcement that the Department will "double down" on R&D investments for technology that will improve passenger processing. Given current conditions, TSA should immediately reassess its R&D and procurement strategy to identify upgrades to current technology or new technologies that will significantly improve the passenger screening process, both in terms of processing time and detection capabilities. Some short-term options for consideration include investments in security lane design and reconfiguration; remote screening; equipment to automate the checkpoint process; immediate development and deployment of advanced algorithms to improve the throughput and detection capabilities of fielded passenger and carry-on baggage screening technologies; and a plan to advance the deployment of next generation CT scanners for the checkpoint.

#### **2) Improve Equipment Qualification and Acquisition Practices:**

Opportunities to improve the passenger screening process have been mired by a lengthy equipment qualification and acquisition process. Many new technologies and technology upgrades are languishing – often for over three years – in the test and evaluation phase and hampered by unnecessary administrative delays, retesting of non-security equipment elements,

and poorly defined requirements. DHS and TSA should immediately develop a plan to improve transportation security equipment (TSE) acquisition by streamlining the test and evaluation process; allowing new technologies to be tested and trialed in the field; and setting strict deadlines on administrative decisions.

### 3) Designate Specified Lane Design Funding and Pre-Screening Improvements:

Increasing TSO staff levels will not decrease wait times alone without significant changes to lane configuration and passenger cueing strategies, where possible. Congress should dedicate additional funding to reconfigured lane design and throughput improvement. This investment will help augment staffing needs and allow TSA to think strategically about how to manage passenger volume increases in the future while reducing airport vulnerabilities. TSA should also consider mobile security checkpoints designed to randomly screen passengers and employees with hand-held explosive trace detection, portable X-ray systems and K-9 units to reduce airport chokepoints at centralized screening locations.

### 4) Revise TSA Equipment Training Protocols and Certifications:

While TSA is examining its current training protocol, the agency should consider allowing manufacturers greater direct input and engagement with trainees on how to efficiently and effectively utilize screening equipment both for speed and detection. In most instances, equipment training is handled by third parties. TSA should look to establish a certification process with the manufacturers to ensure TSOs fully understand the functionality and capabilities of each component.

### 5) Survey Existing TSE Fleet and Replace Aging Equipment:

The TSA manages over 15,000 checked baggage and checkpoint screening technology devices. As equipment is extended past warranty and reaches and exceeds its manufacturer recommended useful life, airports occasionally experience increased wait times and delayed baggage due to greater service and maintenance needs. TSA should more routinely refresh and recapitalize equipment, with a specific focus on those systems that have limited capability to be upgraded to meet current and future requirements, as well as those at or nearing their lifecycle replacement timeframes. This will reduce maintenance expenses, limit equipment downtimes, and ensure higher fidelity and capacity screening equipment is in the field.

### 6) End the Raid on Aviation Security Fees:

Pursuant to the Bipartisan Budget Act (BBA) of 2013, upwards of \$15.8 billion in security fees paid for by travelers, is due to be diverted to deficit reduction and other non-security activities over 12 years. This sort of burden shifting is risky at any time; however, given the increased

passenger volumes and demand on screening infrastructure and the TSA, it seems only prudent to direct these funds to targeted investments in security technology and TSA workforce training.

## CLOSING

As equipment begins to phase out, new technologies must be researched, developed and purchased. New threats cannot be resolved with antiquated solutions.

Industry encourages continued, vigilant oversight. However, we would encourage the Congress to be mindful of new legislation that could serve to bog down an already ponderous acquisitions process with more requirements and procedures. This could serve to add additional delays and costs. We recommend Congress work with TSA and industry to find efficiencies and make this complicated process more streamlined and effective. Doing so will save time and money, while providing OEMs and emerging companies more certainty to develop and produce a new generation of equipment with better capabilities to meet ever-evolving threats.