

**Statement of Steve Karoly**  
**Acting Assistant Administrator**  
**Office of Requirements and Capabilities Analysis**  
**Transportation Security Administration**  
**U.S. Department of Homeland Security**  
  
**before the**  
  
**U.S. House of Representatives**  
  
**Committee on Homeland Security**  
  
**Subcommittee on Transportation and Protective Security**  
  
**April 27, 2017**

Good morning, Chairman Katko, Ranking Member Watson Coleman, and distinguished Members of the Subcommittee. Thank you for the opportunity to appear before you today to discuss the Transportation Security Administration's (TSA) Innovation Task Force (ITF) and its role in fulfilling our mission to protect the nation's transportation systems to ensure freedom of movement for people and commerce. I appreciate the committee's interest in and support of this initiative as we work with our airport, air carrier, and other industry partners to demonstrate emerging technologies at our nation's airports.

**Background**

TSA prioritizes its technology investments based on the latest intelligence concerning terrorist capabilities and intent. This is accomplished by performing risk analyses which serve as the foundation for deriving operational needs and requirements. These analyses take into

consideration potential threats, vulnerabilities to those threats given current system capabilities, and the consequences in the event of an attack. To meet the challenges posed by these risk factors, TSA and industry partners must continually adapt and evolve screening technologies, processes, and systems.

TSA laid out a plan to improve our technology capabilities in the *Strategic Five-Year Technology Investment Plan for Aviation Security* (the Plan), mandated under the Transportation Security Acquisition Reform Act (P.L. 113-245). In the Plan, initially released in August 2015, TSA laid the foundation for what would become the ITF. One of TSA's five focus areas in the Plan includes "Increasing Transparency in Engagement with Stakeholders to Enable Innovation." The Plan acknowledges that one of the difficulties with the development and integration of new capabilities is the integration of these capabilities into TSA's operational environment, given the difficulties of simulating the operational environment prior to formal testing in the field. In addition, the Plan provides a commitment to increase stakeholder access to the operating environments these capabilities are designed to improve or enhance. To deliver on this commitment, TSA established the ITF in the spring of 2016.

TSA launched the ITF to demonstrate emerging capabilities in the passenger screening checkpoint and the checked baggage screening areas and charged the agency to re-envision the entire transportation security system as an integrated whole; increasing security effectiveness, while reducing friction to the traveler. ITF accomplishes this through the establishment of innovation sites. An innovation site is a designated airport where TSA is actively partnering with the airport authority and/or air carrier(s) to demonstrate one or more prototype technology, process, or staffing solutions. The ITF has led to the deployment of Automated Screening Lanes

(ASLs) and is planning new projects ranging from aesthetic improvements to new detection technologies.

### **Site Selection Process**

TSA selects innovation sites based on several criteria to ensure TSA resources are utilized efficiently, and in compliance with the requirements of the FAA Extension, Safety, and Security Act of 2016 (P.L. 114-190). Under our current methodology, TSA selects Category X airports where it will establish innovation sites based on the following site-selection criteria:

- Ability to begin the reconfiguration and installation of security systems expeditiously;
- Ability to share costs through federal funding, airport funding, or otherwise;
- Infrastructure, and space needed to reduce vulnerabilities and reconfigure existing security systems, and not negatively impact current screening capacity;
- Impact to security effectiveness and efficiency, including consideration of detection capabilities; and
- Ability of operational staff and stakeholders to support the initiative.

Sites are continually assessed and may be rotated to minimize resource impacts and secure a representative sample of the field environment.

### **Automated Screening Lanes**

ITF's first innovation solution was Automated Screening Lanes (ASLs) demonstrated at Atlanta-Hartsfield Jackson Airport (ATL). In less than nine weeks, the ITF established ATL as an innovation site and demonstrated ASLs in partnership with Delta Air Lines. ASLs augment existing x-ray screening technology for carry-on baggage and include multiple divestiture

stations, enhanced bin tracking and data capabilities, and automated bin returns. TSA, airports, airlines, vendors, and travelers have recognized ASLs as ground-breaking in advancing security effectiveness, increasing throughput, and improving the passenger experience.

Taking into account the recent terror attacks on public airport areas that took place at Brussels, Los Angeles, and Fort Lauderdale, ASLs provide TSA the capability to address long held concerns regarding crowding in the public areas. ASLs assist in the security of public areas by increasing checkpoint throughput and reducing the number of individuals waiting in line. In September 2016, the Department of Homeland Security (DHS) approved an Urgent Operational Need (UON) justification which authorizes the deployment of up to 220 ASLs at 21 specified airports by January 31, 2018. While the UON authorizes 220 ASLs, deployment at this scale is contingent upon TSA establishing partnerships with stakeholders for additional lane deployments.

After the demonstrated success of the ASLs in Atlanta and after the DHS approval of the UON, TSA partnered with additional airlines and airports to deploy the capability at 25 lanes at 4 airports by the close of calendar year 2016. Since the start of 2017, we have deployed 23 additional ASLs at these airports, bringing the total to 48. TSA and our partners deployed 17 of these lanes earlier this month at Newark Liberty International Airport in what was our largest single ASL deployment to date. In addition to Atlanta-Hartsfield and Newark, ASL's are operational at, Los Angeles, and Chicago-O'Hare International Airports. These efforts are paying measurable dividends in effectiveness, efficiency, and even employee morale.

## **Other ITF Technologies**

While ASLs were the ITF's first demonstrated technology solution, they are not our only planned demonstration. The ITF continues to expand to explore new solutions through temporary demonstrations at airports nationwide.

One such new technology involves utilization of computed tomography (CT) to screen carry-on baggage and accessible property. CT, a mainstay for checked baggage screening, utilizes 3D-imaging and detection software to help operators automatically identify threats and may eliminate the need for divestiture of electronics and liquids for passenger accessible property screening. The demonstration for CT is planned for June of this year at Phoenix Sky Harbor International Airport.

ITF's Biometric Authentication Technology (BAT) proof of concept unit uses contact or contactless fingerprint scanning to verify TSA Pre✓® passenger identity. In the long term, BAT could automate the Ticket Document Checker (TDC) process by verifying passenger identity and Secure Flight vetting status, eliminating the need for a boarding pass, and grant or deny access to passengers via an electronic gate to the security checkpoint. The proof of concept will compare the passenger's fingerprint to the fingerprint the passenger provided to TSA during TSA Pre✓® enrollment. BAT will be demonstrated initially at Denver International Airport and Hartsfield–Jackson Atlanta International Airport for proof of concept testing before the end of the fiscal year.

Additionally, ITF's Passenger Communications initiative streamlines checkpoint operations by presenting passengers with an avatar discussing various procedures such as divesting of carry-on property. TSA is working with airports and terminal operators to demonstrate a variety of passenger communication tools and techniques and provide data for

future checkpoint enhancements and designs. TSA plans to demonstrate Passenger Communications by July 2017 at Atlanta-Hartsfield and Newark.

In an effort to improve our understanding of existing market capabilities, TSA issued a Broad Agency Announcement (BAA) in July 2016 following a June 2016 industry day. TSA received 81 responses and completed over 200 technical reviews with over 30 reviewers from across TSA and the DHS enterprise. Fifty-two percent of the solutions submitted had not been previously deployed domestically or internationally. TSA selected eight of these technologies to potentially join the portfolio of ITF solutions, and referred two solutions to airports for further consideration. Planning activities for these eight technologies are underway. Additionally, TSA plans to release the second innovation-related BAA in May 2017 highlighting specific areas of interest to include mobile screening, queuing and passenger flow, and new detection capabilities.

To be clear, the ITF does not provide a shortcut around traditional DHS acquisition processes. While data gathered from ITF demonstrations may be used to inform manufacturers in the design and preparation of their prototype units for testing at the DHS Transportation Security Laboratory and TSA Systems Integration Facility (TSIF), as well as to inform TSA in developing future technology requirements, technologies that are ITF solutions which involve passenger safety and security still need to go through appropriate rigorous testing at these respective facilities as required under standard acquisition processes before becoming a program of record. These processes ensure that before fully investing in a technology, we know it will enhance transportation security, reduce the risk to the traveling public, and function properly in an operational environment.

## **Conclusion**

The ITF is focused on taking a fresh look at the entire aviation security system. We are working with public and private partners to provide a platform for government, industry, and stakeholders to gather requirements for new approaches to transportation security and accelerate the development and deployment of new technologies and improvements to operations.

I would like to conclude by offering you all the opportunity to visit the TSIF, located nearby at Ronald Reagan Washington National Airport, to see these ITF technologies in action firsthand. I would also like to thank the Subcommittee for its continued support of the ITF, and our airline and airport partners whose support makes this endeavor possible. Thank you for the opportunity to appear here today.