Statement of David Pekoske

Administrator

Transportation Security Administration

U.S. Department of Homeland Security

before the

United States House of Representatives

Committee on Homeland Security

Subcommittee on Transportation and Protective Security

January 18, 2018


Good afternoon Chairman Katko, Ranking Member Watson-Coleman, and distinguished Members of the Subcommittee. I appreciate the opportunity to appear before you to discuss the Transportation Security Administration's (TSA) technology initiatives.

First and foremost, I would like to recognize the Transportation Security Officers (TSOs) on their success in providing security to over 44 million airline passengers during the December holiday travel period. They did so professionally and adapted to accommodate daily screening challenges. Over the past six months, we have seen five of the top 15 total passenger volume days in TSA's history. On average, TSA screens 2.2 million passengers each day. During this past holiday season, the daily rate grew as high as 2.4 million. Keeping up with this challenge would not be possible without our outstanding workforce.

Additionally, I would like to thank Chairman Katko and Ranking Member Watson-Coleman for taking the time to visit TSA headquarters last month for a discussion on transportation security. I look forward to continuing to work with you and your staff to advance TSA's critical mission.

Today's hearing is timely, as technology deployment will be critical to TSA's success in 2018 and beyond. Terrorists continue to target commercial aviation, including cargo, and we must strive each and every day to stay ahead of the myriad threats. In the five months since I

have been on board at TSA, we have seen scores of threats against aviation. I am committed to ensuring TSA remains as successful as it has been in the sixteen years since the agency's founding to protect our transportation systems, especially aviation. Since I have been TSA Administrator, we have improved training, deployed enhanced screening procedures, and have aggressively pursued new technologies. We are continually increasing our ability to detect threat items throughout the aviation security system, and improving technology at the checkpoint will be the focus of my remarks today.

**Checkpoint System**

One of the most significant initiatives at the checkpoint is the introduction of Computed Tomography technology, or "CT," as it is commonly referred. I know some of you have seen CT being tested overseas at Amsterdam's Schiphol Airport and domestically at Boston Logan International Airport and Phoenix Sky Harbor International Airport. CT is not new technology. The idea for CT was conceived in the 1960s and first employed for medical applications in the early 1970s; however, it has evolved and is now used in other arenas, such as in aviation security. In fact, TSA has been using CT scanners to screen checked baggage since the agency's inception in 2001. Over the past few years, industry has been aggressively working to reduce the technology equipment's size and adjust its configuration to make it a viable option for deployment at most airport checkpoints. TSA continues to work closely and expeditiously with CT equipment manufacturers to improve detection algorithms, optimize throughput, and automate the detection of prohibited items so that CT technology can deliver the full host of capabilities needed to address checkpoint vulnerabilities into the future.

Once fully developed for the aviation environment, checkpoint CT technology will deliver a significant advancement over today's two-dimensional X-ray technology platforms. Checkpoint CT screening technology provides a three dimensional view of the bag and enables the TSA officer to rotate the bag 360 degrees to show the contents at every angle. CT features allow officers to virtually remove unwanted clutter, and greatly enhances their ability to visually inspect the contents of carry-on bags for explosives and prohibited items. In these ways, CT offers substantially improved detection capability by more effectively detecting smaller and artfully concealed threats, thereby increasing our overall security effectiveness while enabling

passengers to leave electronics in their carry-on bags. Ultimately, we hope to refine checkpoint CT technology to the point where, similar to the checked baggage process, we have automated the carry-on baggage screening process and reduced the need for officers to review all images.

In order to further our efforts and capabilities, TSA is working closely with industry partners, the Department of Homeland Security (DHS) Science and Technology Directorate, and international counterparts. Together, we are exchanging information and best practices related to operational and laboratory testing, explosives characterization, CT platform enhancements, and image library development. TSA is working closely with the European Commission, European Civil Aviation Conference, and bilaterally with the United Kingdom, France, Germany, and the Netherlands to share test results with the goal of aligning detection requirements and testing methodologies. The Netherlands, Turkey, Japan, Singapore, and South Africa are currently testing CT technology at their checkpoints, which allows for robust information sharing and ultimately guides the successful deployment of this technology.

We are also leveraging academia to develop innovative software algorithms to more accurately identify prohibited items. Through our own Innovation Task Force, TSA is providing CT vendors with end-user feedback and real world operational data to further operational development, effectiveness, and efficiencies. In short, checkpoint CT development is a worldwide effort to achieve the best screening solution that is technologically possible today. Deployment of this technology, both here at home and abroad, is a critical component of raising the global aviation security baseline.

My team has developed an aggressive plan to deploy checkpoint CT technology. We are currently pursuing a flexible approach to test, procure, and deploy CT systems, while concurrently developing CT system algorithms to significantly improve automated threat detection capabilities. This approach employs the concepts of modularity and iterative design to support deployment of specific capabilities as part of a larger solution, while progressively expanding functionality until the full CT capability is realized.

Deployment of CT technology at checkpoints is one of my top priorities, and a priority for DHS leadership as well. In FY2018, we will field almost 40 units for developmental and

operational testing, with the goal of pursuing broader deployment and continued algorithm development in the first half of FY2019, dependent on funding availability. Such efforts for the acquisition of this technology and others will be reflected in the Capital Investment Plan and TSA Strategy and Intent that I am currently developing to guide our investment approach moving forward.

Concurrent with our CT efforts, we are also pursuing other technologies to increase security at checkpoints. Two such technologies are enhanced Advanced Imaging Technology (AIT) and Credential Authentication Technology (CAT). TSA continues to improve our current AIT capabilities. As you may know, AIT uses imaging technology to scan individuals and analyze the images for the presence of anomalies beneath clothes, and in obscured areas. There are currently 945 AIT units deployed at 340 airports system-wide. Upgrades to this technology include greater detection capabilities in response to some of the vulnerabilities identified by the DHS Office of the Inspector General (OIG) in 2015 and in 2017. Other changes include software that will allow TSOs to process passengers through the AIT more expeditiously, thereby improving passenger flow through the checkpoint. In addition to these upgrades to currently fielded AIT units, TSA is working with other vendors to ensure we are testing every passenger screening technology available to provide our TSOs with better tools to assist them in performing their duties. TSA will be demonstrating an enhanced AIT capability in the field later this quarter, gaining critical insights into potential technology improvements that will move us closer to the future checkpoint vision.

Another key technology under development for our checkpoints is CAT; which will greatly enhance the vital role that the Travel Document Checker (TDC) plays in ID verification, boarding pass validation, and screening status determination. Specifically, CAT will improve the TDC's ability to accurately authenticate passenger identification documents, passenger ticketing status, and Secure Flight passenger vetting status, thereby addressing vulnerabilities associated with ID fraud and providing real-time vetting information at the checkpoint on passengers. There are 33 CAT systems currently deployed for technical testing in TSA Pre✓® lanes at 10 airports, including both Reagan National and Dulles airports, to optimize system functionality and associated Concept of Operations (CONOPS.)

TSA is currently assessing another technology known as Automated Screening Lanes (ASLs). ASLs are already proving their worth and currently 111 ASLs are deployed at 12 airports including Newark, JFK, LaGuardia, Boston, and Atlanta. These lanes are not only designed to increase throughput, they also provide better security by offering capabilities such as automated pulls of bags needing further inspection, automated tracking of bins linking to the x-ray and picture images, and automated bin return allowing officers to focus on security, instead of moving bins from the end of the lane to the beginning. I envision that integrating CTs with ASLs will provide significant technological and screening process improvements at our checkpoints, and we plan on testing this integration in the near future. I appreciate the great partnerships with airlines and airports for their role in the procurement and deployment of ASLs.

## Acquisition Process

Critical to the success of TSA's technology strategy and our ability to stay ahead of the threat is the capability to acquire, procure, develop, test and field new technologies in a timely manner. As the Chairman has noted, this is an area that needs improvement and I want to assure you we are evaluating ways to accelerate the acquisition process. In an effort to further identify ways to improve efficiencies in the process, DHS and TSA are evaluating existing rapid acquisition processes across the U.S. government to leverage known experience and best practices as we develop a model to accelerate acquisition efforts and the ultimate deployment of effective solutions within a dynamic operational environment. With your support, we are confident that we will be able to create an acquisition paradigm that ensures accelerated deployment and preserves the integrity needed to deploy effective and cost efficient capabilities.

## Conclusion

TSA is committed to securing the Nation's transportation systems from terrorist activities and attacks. This year, we are focused on maturing and deploying additional CT-based systems and working closely with our domestic and international partners to raise the global baseline for aviation security. In addition, I'm developing a Capital Investment Plan, coupled with the TSA Strategy and Intent, which will chart the future course for improvements in checkpoints and checked baggage systems. I look forward to working with you on these efforts to secure our

robust transportation sector. Thank you for the opportunity to discuss these important issues. I look forward to the Subcommittee's questions.