

Why GAO Did This Study

TSA accelerated the deployment of AIT systems, or full-body scanners, in response to the December 25, 2009, attempted terrorist attack on Northwest Airlines Flight 253. Pursuant to the Federal Aviation Administration Modernization and Reform Act of 2012, TSA was mandated to ensure that AIT systems were equipped with ATR software, which displays generic outlines of passengers rather than actual images, by June 1, 2013. All deployed AIT systems were equipped with ATR software by the deadline. GAO was asked to evaluate TSA's AIT-ATR systems' effectiveness. This report addresses the extent to which (1) TSA collects and analyzes available information that could be used to enhance the effectiveness of the AIT-ATR system and (2) TSA has made progress toward enhancing AIT capabilities to detect concealed explosives and other threat items, and any challenges that remain. GAO analyzed testing results conducted by the Transportation Security Laboratory and TSA personnel at airports and interviewed DHS and TSA officials. This is a public version of a classified report that GAO issued in December 2013. Information DHS and TSA deemed classified or sensitive has been omitted, including information and recommendations related to improving AIT capabilities.

What GAO Recommends

GAO recommends that TSA, among other things, clarify which office should oversee its operational directive, better measure system effectiveness, and develop a realistic schedule before procuring future generations. TSA concurred with GAO's recommendations.

View [GAO-14-357](#). For more information, contact Stephen M. Lord at (202) 512-4379 or lords@gao.gov.

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ADVANCED IMAGING TECHNOLOGY

TSA Needs Additional Information before Procuring Next-Generation Systems

What GAO Found

The Department of Homeland Security's (DHS) Transportation Security Administration (TSA) does not collect or analyze available information that could be used to enhance the effectiveness of the advanced imaging technology (AIT) with automated target recognition (ATR) system. Specifically, TSA does not collect or analyze available data on drills using improvised explosive devices (IED) at the checkpoint that could provide insight into how well screening officers (SO) resolve anomalies, including objects that could pose a threat to an aircraft, identified by AIT systems, because it does not enforce compliance with its operational directive. TSA's operational directive requires personnel at airports to conduct drills to assess SO compliance with TSA's screening standard operating procedures and to train SOs to better resolve anomalies identified by AIT-ATR systems. GAO found that TSA personnel at about half of airports with AIT systems did not report any IED checkpoint drill results on those systems from March 2011 through February 2013. According to TSA, it does not ensure compliance with the directive at every airport because it is unclear which office should oversee enforcing the directive. Without data on IED checkpoint drills, TSA lacks insight into how well SOs resolve anomalies detected by AIT systems, information that could be used to help strengthen existing screening processes. Potential weaknesses in the screening process could be caused by TSA not clarifying which office is responsible for overseeing TSA's operational directive, directing that office to ensure enforcement of the directive in conducting these drills, and analyzing the data. Further, when determining AIT-ATR system effectiveness, TSA uses laboratory test results that do not reflect the combined performance of the technology, the personnel who operate it, and the process that governs AIT-related security operations. TSA officials agreed that it is important to analyze performance by including an evaluation of the technology, operators, and processes and stated that TSA is planning to assess the performance of all layers of security. By not measuring system effectiveness based on the performance of the technology and SOs who operate the technology or taking into account current processes and deployment strategies, DHS and TSA are not ensuring that future procurements meet mission needs.

TSA completed the installation of ATR software upgrades intended to address privacy concerns for all deployed AIT systems; however, it has not met proposed milestones for enhancing capabilities as documented in its AIT roadmap—a document that contains milestones for achieving enhanced capabilities to meet the agency's mission needs. For example, TSA began operational test and evaluation for Tier II upgrades 17 months after the expected start date. Moreover, TSA did not use available scientific research or information from experts from the national laboratories or vendors on the technological challenges that it faces in developing requirements and milestones, because, according to TSA, it relied on time frames proposed by vendors. Thus, TSA cannot ensure that its roadmap reflects the true capabilities of the next generation of AIT systems by using scientific evidence and information from DHS's Science and Technology Directorate, the national laboratories, and vendors to develop a realistic schedule with achievable milestones that outlines the technological advancements, estimated time, and resources needed to achieve enhanced capabilities as outlined in TSA's roadmap.