

WHITE PAPER / **REMOTE SCREENING TECHNOLOGY**

# REALIZING THE BENEFITS OF REMOTE SCREENING FOR AIRPORTS, PASSENGERS AND THE TSA

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The COVID-19 pandemic prompted airports to look for new ways to provide passengers with a safe and healthy travel experience. Remote screening technology can offer airports, the Transportation Security Administration and passengers with new benefits that meet changing needs.



Airport security must continue to evolve as air transportation grows and changes to meet the shifting demands of the modern traveler. New technologies have been introduced in this time to offer faster screening and provide better convenience while continuing to keep the traveling public safe.

Automated screening lanes (ASLs) and computed tomography (CT) screening machines provide an example of the types of technologies that the Transportation Security Administration (TSA) and airports have introduced to increase throughput and improve the overall experience. Now, with the landscape changing further in response to the recent COVID-19 pandemic, remote screening technology is an instrumental tool that airports can deploy to reduce passenger queues, enhance the effectiveness of security checkpoints and introduce operational efficiencies.

Remote screen technology has already been implemented at multiple airports in the U.S. and several in Europe at the time of this publication, proving its capability and value. As airports look to develop new operational guidelines for safely handling their capacities, remote screening can be utilized to provide both enhanced security operations and limit person-to-person contact, eventually leading to regional screening through wide area networks. In the U.S., this could mean altering the way that the TSA operates and deploys its resources and training programs to make more effective use of remote screening technology.

## WHAT IS REMOTE SCREENING?

The remote screening software captures data from existing screening machines (computed tomography or X-ray) and presents images for automated threat detection and remote image analysis. Image analysis can be performed in a centralized screening room using an image queuing system commonly referred to as multiplexing.

The images are then distributed to Transportation Security Officers (TSO) who are tasked with performing image analysis in a first-in, first-out review system. In this way, the first available image goes to the first available operator, essentially maximizing the number of images

that can be viewed per hour and removing the bottleneck created by a one-operator-per-lane image analysis model.

Screeners that analyze images can be remotely located and can receive images to screen from multiple lanes. The screening room can be located anywhere at the airport or even off-site in a regional screening operations center. To accomplish wide area network remote screening, airports need industry professionals to assess, program, design and construct the security-sensitive, mission-critical network infrastructure. This provides a more secure, distraction-free work environment better suited to the stressful task of analyzing images than a traditional checkpoint.

At its core, remote screening allows staff to remotely review carry-on property scanner images, moving TSOs away from the checkpoint floor and, therefore, the passenger. While remote screening only exists at a limited number of checkpoints, airports with automated screening lanes and multiplexing capabilities allow TSOs at various lanes to review scanner images at alternate lanes and increase social distancing within the checkpoint.

To begin, airports and the TSA must develop the flexible, scalable physical environment required for the technology. This infrastructure must be as dynamic as possible to meet unpredictable passenger demand. Once the physical environment is built, deploying a modular equipment configuration allows screening operations to scale up and down based on demands.

## REALIZING OPERATIONAL EFFICIENCIES

The overall concept of remote screening and the software it uses provides a variety of operational benefits to the TSA, airports and passengers.

### INCREASED THROUGHPUT

As passenger numbers continue to grow, the need to continue providing efficient security checkpoint processes with fewer security screening resources will become more relevant. One of the key benefits of multiplexing is increased productivity, enabling 30%-50% higher throughput per lane. This reduces queues and provides passengers with a better airport experience.

## SOCIAL DISTANCING

Airports are seeking innovative ways to balance social distancing guidelines with limited queuing space and unpredictable passenger volumes. Remote screening is integral to maximizing terminal space in and around security screening checkpoints.

Remote screening also offers the TSA a workforce safety solution that relocates some TSOs from the checkpoint, reducing contact with passengers.

## PASSENGER EXPERIENCE

Passengers have choices when it comes to airports, especially in urban areas. Enticing travelers to use an airport requires an environment be built that automates manual touchpoints to create seamless movement through the space. Remote screening contributes to a convenient experience by speeding up the security checkpoint process, thus inviting passengers to frequent airports that implement it.

## REDUCED SPACE

Airports and the TSA are now looking for ways to do more with less space due to ongoing social distancing guidelines in response to COVID-19. Compared to the currently used technology at conventional security checkpoint

lanes, remote screening with automated screening lanes allows for fewer lanes in the checkpoint. Right-sizing checkpoints reduces the amount of real estate the airport must give up that could be utilized for non-aeronautical revenue streams.

## ENHANCED SECURITY

Remote screening capabilities go a long way in addressing insider threats, or a situation where a local image analyst can attempt to circumvent security protocols by intentionally clearing prohibited items. In the remote environment, the process is completely anonymized, meaning TSOs will not know what lane it came from or whose item they are screening.

## DATA-DRIVEN DECISION-MAKING

Currently, the TSA manually collects checkpoint data using handwritten forms. By automating data collection and real-time monitoring using remote screening, the TSA will have the capability to look at data across all lanes throughout a location, several locations or, even, the entire country. Turning this operational data into actionable insights will increase situational awareness to identify security-related hot spots, then deploy resources to those areas to address concerns before they can become significant issues.



## MATCHING OPERATIONS TO THE TECHNOLOGY

Today, the use of remote screening in U.S. airports is limited by a distance requirement in the TSA's Checkpoint Requirement Planning Guide, which states that a "resolution room is expected to be a built-in room, preferably within 100 feet of the checkpoint." However, leveraging wide area networks to push remote screening even farther from the airport will significantly challenge this requirement but also bring further benefits to the TSA and the airports.

The TSA is responsible for security operations at nearly 450 airports throughout the U.S. with varied passenger numbers and demand. With wide area networks, multiple airports can be screened from one centralized location or at multiple regional hubs. Through this, the TSA would have the ability to staff up or right-size for peaks and valleys in passenger traffic and reduce the requirement of traveling TSOs around the country to staff airports.

Additionally, remote screening streamlines training by providing a singular, vendor-agnostic solution set for image operations. By reducing the amount of training required and simplifying delivery, TSA can shift toward job specialization that will result in higher employee engagement and effectiveness. For example, personnel who are more introverted and analytical may prefer to perform work based on their personality type. On the other hand, extroverts who enjoy engaging with the traveling public are empowered to perform their preferred function.

## LOOKING AHEAD

When it comes to checkpoint design, construction and operation, there are several key considerations that airports should heed to effectively accommodate remote screening. Beyond the space and infrastructure requirements needed to support the screening equipment and TSOs operating it, airports need to take into account new distancing guidelines, future technologies, and even environmental factors like heat, humidity and sun glare.

As the threat landscape continues to evolve, so must the people, processes and tools to combat it. Remote screening offers the TSA a means to provide heightened

security among new passenger expectations, as well as an opportunity to adjust its training and job distribution model to accommodate workers' natural abilities and interests. For airports, the data gathered through this technology contributes to heightened operational awareness, leading to more predictive and proactive decisions that in turn raise the security baseline, make the checkpoint process quicker and reduce passenger contact. More than anything, remote screening is proving its ability to deliver better security, faster.

## BIOGRAPHIES

**DOUG DEIHL, VANDERLANDE INDUSTRIES**, is the head of PAX Solutions North America. With more than 20 years of international business experience, he has worked with airports across the globe to successfully deploy new technologies such as computed tomography, remote screening and automated screening lanes used to enhance security effectiveness, improve passenger experience and increase operational efficiencies.

**NATHAN SIMS, BURNS & McDONNELL**, is an aviation security and technology project manager. With more than 15 years of experience in the air transportation industry, he has successfully applied emerging technologies and adapted processes to improve security and operational efficiency and effectiveness. His experience as a project and business development manager has empowered him to drive innovative solutions from concept through delivery.

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