The landscape of the airport security checkpoint is shifting, changing to meet new passenger demands and evolving security threats. New technologies are constantly being developed — such as automated screening lanes and computed tomography (CT) screening machines — that are continuing to offer new ways to better serve the traveling public and enhance airport security.

Now, a software solution known as remote screening is changing the game further. Having already been implemented at eight airports in the U.S. and several in Europe, this technology has proven its ability to reduce passenger queues, enhance security effectiveness and improve operational efficiencies at security checkpoints.

In the wake of the COVID-19 pandemic, as airports look to develop new operational guidelines for safely handling the resurgence of passenger volumes, remote screening can be utilized to provide not only better screening efficiency and other operational benefits, but also a means for removing some Transportation Security Administration (TSA) officers from the checkpoints and limiting exposure to travelers, who may be carrying infectious diseases.

HOW IT WORKS
The remote screening software captures data from existing screening equipment (computerized tomography or X-ray) and makes images available for automated threat detection and remote image analysis. X-ray image analysis can be performed in a centralized screening room using an image queuing system.

The images are then distributed to TSA operators in a process called multiplexing, or 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 X-ray 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 in a regional screening operations center, provided the proper network infrastructure is in place to support the process. This provides a distraction-free work environment better suited to the demanding task of analyzing X-ray images than a traditional checkpoint.

GAINS IN OPERATIONAL EFFICIENCY
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 return to normal levels, 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 provides passengers with a better airport experience and reduces queues.

SOCIAL DISTANCING
Airports are seeking innovative ways to balance physical distancing guidelines with limited queuing space and unpredictable passenger volumes. Remote screening will be integral to maximizing terminal space in and around security screening checkpoints. Remote screening also offers the
TSA a workforce safety solution that removes TSA operators from the checkpoint, reducing contact with passengers.

DATA COLLECTION
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, allowing the TSA to then deploy resources to those areas to address concerns before they become significant issues.

REDUCED SPACE
Airports and the TSA are now looking for ways to do more with less space due to ongoing physical 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 nonaeronautical revenue streams.

PASSENGER EXPERIENCE
Passengers have choices when it comes to airports, especially in urban areas. Enticing travelers to use an airport means cultivating an environment that offers the aesthetics and technological convenience to create a seamless journey. Remote screening contributes to a convenient experience by speeding up the security checkpoint process, thus inviting passengers to frequent airports that implement it.

A PLATFORM FOR PROGRESS
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, the use of wide area networks to push remote screening even farther from the airport will significantly challenge this requirement and bring further benefits to the TSA and the airports.

The TSA is currently working in 440 airports 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 moving TSA operators around the country to staff airports.

BUILT FOR TOMORROW
When it comes to checkpoint design, construction and operation, there are several key considerations that airports should heed to accommodate remote screening. Beyond the space and infrastructure requirements needed to support the screening equipment and those 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 and airports a means to raise the security baseline, make the checkpoint process quicker and reduce passenger contact.

For a deeper dive on this solution, read our whitepaper at burnsmcd.com/RemoteScreening.

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