

How airport security changed and how it must change again [Corrected 09/08/2021]

Jacobson, Sheldon H; PhD . Chicago Tribune ; Chicago, Ill. [Chicago, Ill]. 08 Sep 2021 : 8.

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FULL TEXT

Twenty years ago this week, airplanes were used as weapons to topple the twin towers and inflict damage on the Pentagon. It marked the beginning of a new era for airport security, with such operations eventually federalized under the then-newly created Transportation Security Administration.

The events of 9/11 continue to affect every person who flies. Days of greeting arrivals at the gate ended. Emerging threats evoked new screening procedures, such as the removal of shoes prior to screening and limits on liquids permitted through security checkpoints.

The one-size-fits-all screening mindset lasted 10 years, until the TSA got smart and launched TSA PreCheck in October 2011. TSA PreCheck was a risk-based strategy that provided expedited screening for those willing to undergo and pay for a voluntary background check in exchange for streamlined physical screening at airports. Nearly one-half of all passenger screenings were in PreCheck lanes from 2016 to 2019, making it the most popular airport security program available. With COVID-19 creating additional health risks at airport security checkpoints, PreCheck passengers were able to move through the checkpoint area more quickly, reducing their risk of contracting the disease, making it an even more valuable program during the pandemic.

No one knows whether all these changes prevented any airport security breaches that could have had catastrophic consequences, as was seen on 9/11. What they did do was steer perpetrators toward other vectors of destruction. This likely led to events like the 2017 Fort Lauderdale International Airport and the 2013 Los Angeles International Airport terminal shootings.

What should air travelers expect over the next decade? Technology continues to advance for screening carry-on baggage, with recent deployment of CT scanning devices. Given the varied shapes and materials that go into threat items like firearms and explosive devices, even the most sophisticated screening technologies are limited by the ability of transportation security officers, or TSOs, to interpret the images that they project.

The key to making airport security more effective and less intrusive has been and will continue to be assessing human intent. No technology exists to measure the likelihood that a person will inflict harm within the air travel system. This is where risk-based strategies play a vital role.

Risk-based strategies are part of the TSA security arsenal, but they have languished for the past five years, as new administrators come and go with their own pet projects to support and advance. During these transitions, risk-based strategies have gotten lost in the melee and as such, have become underutilized.

Lasting improvement of airport security demands a return to the foundations of risk-based strategies.

The first push is to get more people signed up for TSA PreCheck by offering it to anyone interested, at zero or minimal cost. Millions of people who travel just a few times per year pose no risk to the air travel system. Yet these people are routinely over-screened, using valuable security screening resources and diverting TSOs' attention away from potentially risky passengers. These infrequent travelers also currently have no incentive to pay for PreCheck status. Enrolling such people in a PreCheck-lite program would reduce security costs and make security operations more efficient and effective.

The second push is to add a PreCheck-plus level that affords passengers even more ease of passing through security checkpoints, much like what airline pilots enjoy today. Self-screening lanes would fall within this rubric.

Many business travelers would be willing to pay for such a classification, and would be willing to subject themselves to the necessary background scrutiny to achieve such status.

The third push is to employ artificial intelligence in how passengers are vetted for PreCheck-lite, PreCheck or PreCheck-plus status. Standard background checks are too coarse to capture such subtle risk assessments. Risk-based security relies on the integrity of background checks, to make the physical component of airport screening as efficient and unobtrusive as possible. The plethora of data available allows artificial intelligence algorithms to achieve such objectives.

The TSA will continue incrementally changing airport security operations and technologies to achieve better performance. Technologies have their role, but they are not the panacea some hope them to be. A commitment to risk-based security in conjunction with artificial intelligence can be used to make airport security both more palatable and more secure. All that is required is a willingness to act in the best interest of the flying public.

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CAPTION: Photo: Passengers walk through a TSA PreCheck in Terminal 1 at O'Hare International Airport in 2017.

ARMANDO L SANCHEZ/CHICAGO TRIBUNE

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DETAILS

Subject:	Airline security; Travel; Airports; Air travel; Security management; Artificial intelligence; Passenger screening; COVID-19
Business indexing term:	Industry: 48811 : Airport Operations
Classification:	48811: Airport Operations
Publication title:	Chicago Tribune; Chicago, Ill.
First page:	8
Publication year:	2021
Publication date:	Sep 8, 2021
Section:	News
Publisher:	Tribune Publishing Company, LLC
Place of publication:	Chicago, Ill.
Country of publication:	United States, Chicago, Ill.
Publication subject:	General Interest Periodicals--United States
ISSN:	10856706
Source type:	Newspaper

Language of publication:	English
Document type:	News
ProQuest document ID:	2569968240
Document URL:	https://www.proquest.com/newspapers/how-airport-security-changed-must-change-again/docview/2569968240/se-2?accountid=14553
Copyright:	Copyright Tribune Publishing Company, LLC Sep 8, 2021
Last updated:	2021-09-08
Database:	Chicago Tribune

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