Pandemic is pushing air travel further toward a biometrics-centric future

By Stephanie Beasley

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A precipitous drop in travel spurred by the coronavirus is forcing the aviation industry to rethink how it gets people onto planes, and could usher in a new era of contactless technologies, including increasingly ubiquitous biometric scans that are fraught with privacy concerns.

Since March, the airline industry has rushed to adopt a host of biometrics and other touchless tech that could ultimately be enduring, similar to the way that strengthened security protocols have continued long past the terrorist attacks of Sept. 11, 2001.

At Los Angeles International Airport, passengers now can use touchless faucets, drinking fountains and elevators. Thermal imaging cameras scan passengers' temperatures. Kiosks for Global Entry, the international trusted traveler program, now use facial recognition scanners. And the airport hopes to expand its biometrics even further, LAX CEO Justin Erbacci said.

It's all in service to soothing passengers' fears about contracting the coronavirus in an airport or on board an airplane, where masses of people congregate for hours at a time, often in the tightest of spaces.

Erbacci said the airport had been moving toward biometrics and other contactless technologies already, but that the pandemic has accelerated the process. Airports are making these investments even though they're hurting financially from plunging passenger volumes, he said.

"We recognize that we're not going to be able to get people to feel comfortable to travel again, unless we're making sure that our facilities are as clean and as healthy, as safe as possible," Erbacci said.

TSA is making technology changes, too. For example, TSA now allows passengers to insert their own ID cards into credential authentication machines instead of having agents do it, and has begun planning other technological shifts intended to help reduce person-to-person contact.

But not everyone is on board with the idea of a more touchless air travel experience, even if it could potentially be faster and healthier. The American Civil Liberties Union remains concerned that biometrics could be used to violate civil rights and privacy rights, warning that the federal government could use the pandemic as an excuse for unwarranted expansions of data collection tools.

"We must be vigilant to ensure that the pandemic is not exploited opportunistically to entrench discriminatory and privacy-invasive practices in aviation," Neema Singh Guliani, senior legislative counsel for the ACLU, said in written testimony for a June congressional hearing.

Guliani said the ACLU worries that the response to Covid-19 will be a repeat of 9/11, "where we rushed to adopt many new and concerning security measures that cost billions, were ineffective, violated individual's rights, and have been difficult to undo."

Regardless, the shift is already proceeding apace as airports and airlines scramble to rebound from the damage the pandemic has wreaked on their bottom lines. Airlines have said they expect to lay off thousands of employees if federal aid isn't renewed at the end of September. Moody Investors Service has said it's unlikely that passenger volumes will return to 2019 levels in the next three to five years.

Airlines are aware that a full recovery is likely years away, but that doesn't mean they aren't doing what they can to get travelers to come back as soon as possible, said Lauren Beyer, vice president of security and facilitation for airline trade group Airlines for America.

"It took three years for passenger volumes to recover after 9/11 and then over seven years to recover from the 2008 financial crisis," she said. "So, we do not expect the return to 2019 passenger levels to happen quickly."

She noted that airlines have been swift to adopt measures, including mandating masks in-flight, to help travelers feel more comfortable. But A4A would like the federal government to do more to help with those changes, including putting TSA in charge of taking passengers' temperatures, she said. That appears unlikely: TSA Administrator David Pekoske recently told POLITICO temperature checks should fall to airports and airlines.

Airlines hope to continue working with TSA to roll out other innovations like more advanced screening machines with lower false alarm rates, which can help reduce the need for physical pat-downs, as well as curb-to-gate biometric terminals like the one at Atlanta's Hartsfield Jackson International Airport, Beyer said.

In July, DHS, DOT and the HHS issued a "Runway to Recovery" document with recommendations for how to safely resume air travel that encouraged passengers, airports and airlines to participate in DHS biometric passenger security programs to reduce the spread of Covid-19. TSA officials also said during an industry day event earlier this month that the agency also is looking to invest in more touchless technologies like biometric and "enhanced" document checkers.

But TSA will likely need Congress to bankroll its contactless tech revolution. Airport and security technology manufacturer groups recently sent a letter to lawmakers, pushing them to provide TSA with $208 million in relief funding for touchless technologies.

"New technological investments and increased cleaning efforts will provide TSA with the capability to reduce passenger 'touch points' and increase social distancing at security checkpoints," wrote Airports Council International-North America, American Association of Airport Executives and Security Manufacturers Coalition.

Senate and House appropriators have generally supported funding for 3D computed tomography scanners and credential authentication technology. The Senate has yet to roll out a bill, but the House's fiscal 2021 Homeland Security appropriations bill, H.R. 7669 (116), includes $75 million for CT scanners — $46 million above the White House request. It also includes $55 million for credential authentication and standoff detection technology.

House Appropriations Homeland Security Subcommittee Chair Lucille Roybal-Allard has said that House appropriators are prepared to address additional funding needs related to the pandemic for TSA and other DHS subagencies "later in the process based on formal requests from the administration."

Money issues aside, there are other significant challenges to TSA deploying wholly new equipment, said Steve Karoly, the former head of TSA's office of requirements and capabilities. Ordering "basic" acrylic walls and modifying the procedures for using existing technologies like credential authentication isn't as involved as putting out something more complicated like, for example, a self-service security booth, he said.

"They may go a little fast when it comes to piloting these things and trying things out — maybe that process goes from five years to three years — but stuff like that is not going to be like tomorrow," said Karoly, who is now executive vice president of K2 Security Solutions.

Airports, airlines and the private sector continue to actively press forward on contactless solutions, despite the government's pace.

Manufacturer Thruvision, for instance, has pitched its portable imaging technology, which detects weapons and explosive devices on passengers by using heat emissions to map a person's body. Kevin Gramer, vice president of Thruvision USA, said the machines would eliminate the need for physical pat-downs. That's something that would benefit TSA even outside of its Covid-19 response, given how often travelers have criticized TSA's pat-down process as racist and transphobic, he said.

Outside of security screening, airports and airlines continue to explore ways to reduce touchpoints. A spokesperson for American Airlines noted that it had "recently launched a new touchless check-in experience for customers allowing them to proceed to the gate without touching the kiosk screen, even if they are checking a bag," and encouraging the use of mobile boarding passes.

Denver International Airport partnered with biometrics company Daon to launch the Verifly program, which will allow passengers to book a slot for "safe passage" through a TSA security lane protected by full partition stanchions, said Chris McLaughlin, the airport's chief operating officer. Passengers can opt-in to the reservation system after certifying their health status, which will then be linked to biometric data that will be used to verify their identity upon arrival and allow entry to a restricted airport train car after they've gone through security, he said.

"So in every 15 minute increment, you'll be able to breeze through a security lane and then get on a train with maybe nine to 10 other people, which is quite a bit less than that car's capacity, and then safely get out to the concourse," McLaughlin said.

He said the airport will begin piloting the program next month and would like to eventually add amenities that will include real-time temperature checks. Verifly will hopefully reduce congestion at the airport and spread out passenger arrivals times, which will have the effect of reducing contact, McLaughlin said.

The Denver airport already had been installing self-bag drops and also is planning to partner with TSA and Daon to conduct security and health screenings from remote locations and then bus people directly into concourses, so that they can avoid the airport altogether, said McLaughlin, who was TSA's top security official when it was standing up the Precheck trusted traveler program.

He said the pandemic is forcing the aviation industry to take an "all-hazards" approach after focusing heavily on security for the past two decades — a shift that may endure well beyond present-day concerns. These additional health and safety measures will help people feel confident about air travel again following the pandemic, much as new security measures did after Sept. 11, 2001, he said.

"This will be, at the end of the day, a blip in the road and we'll grow past it," he said.