

Getting back to business travel At the airport

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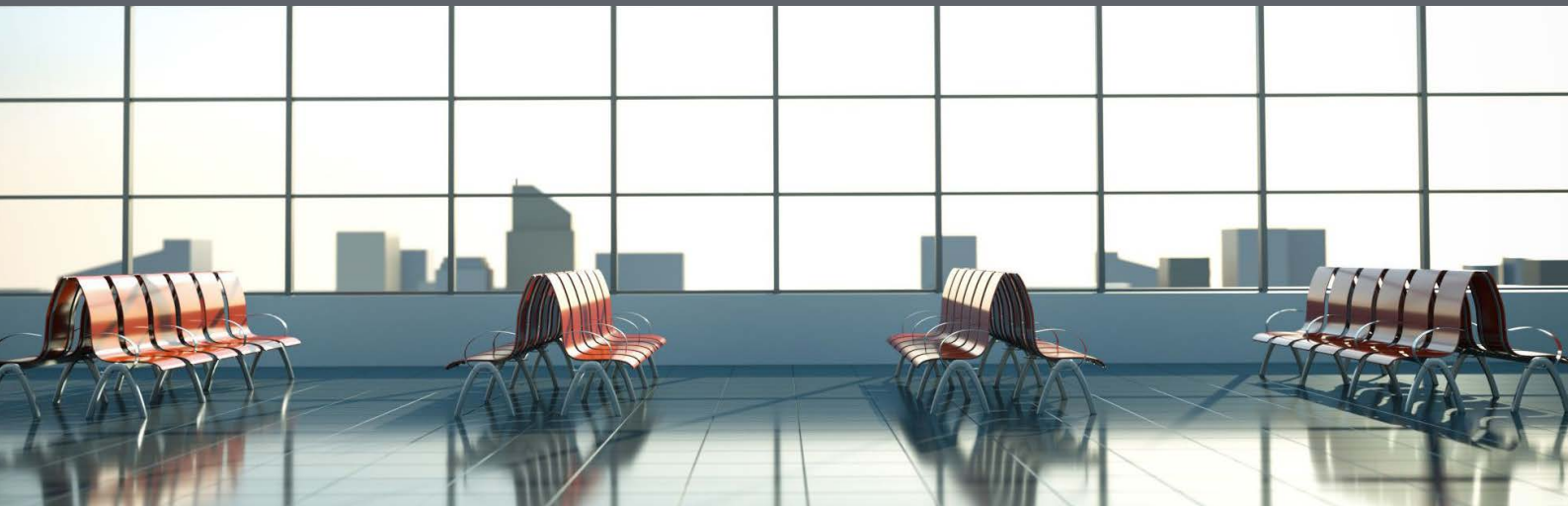
To give people the confidence to resume travel, measures are already being rolled out by suppliers, regulators and other organizations to ensure they can do so safely, with a much-reduced risk of exposure to COVID-19.

Many aspects of air travel may not return to how they were before COVID-19. The six stages a traveler has to navigate on a typical journey through the airport demonstrate the complexity of the challenges facing airport operators in their effort to protect travelers and contain the spread of COVID-19.

Six stages of the airport journey:

1. Arrive 1-3 hours before flight departure
2. Check-in for boarding pass and baggage tag
3. Security and immigration
4. Shop, eat, work, relax and refresh in the departure lounge/airline lounge
5. Go to gate
6. Wait at gate, then queue to board the aircraft





Some of the changes airport operators are making will be temporary, simply to restart travel, or may evolve as the pandemic runs its course; others may become permanent features of the airport experience. Each airport is approaching COVID-19 differently. Before embarking on their next trip, travelers can find out exactly what COVID-19 measures are in place by visiting the website and pressroom for each airport in their itinerary.

What does the new future of the airport experience look like? This report provides some of the answers, detailing changes already introduced in some airports and some that are on the way, and even speculating on some of the more innovative approaches airport operators may adopt to protect passengers from COVID-19.

Business travelers consider frequent and enhanced cleaning as the most important adjustment airports can make in response to COVID-19.¹ They still also recognize the need for social distancing measures, mask wearing, temperature checks and testing, and a contactless experience.

Airport measures that travelers consider most important for ensuring safe travel



Source: BCD Travel, COVID-19 Traveler Study, May 2020

¹BCD Travel, [Survey](#), COVID-19 traveler study, May 2020



Enhanced cleaning

Cleaner terminals

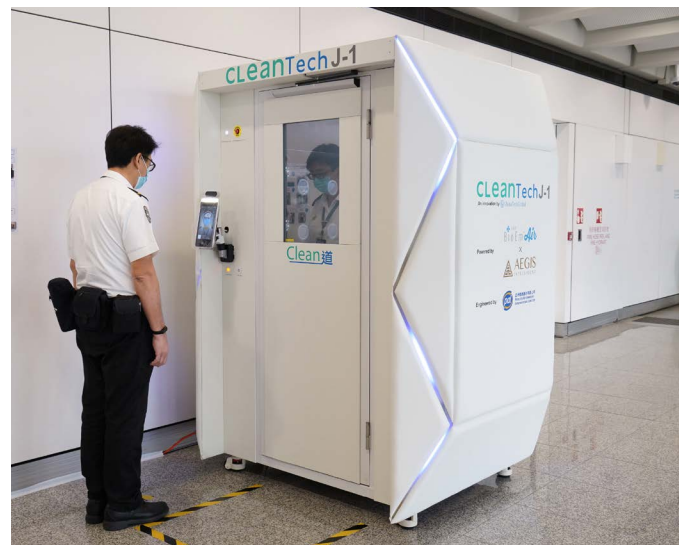
While industry organizations, such as trade association ACI World, have published sanitization guidance and information, airports must ultimately meet the safety and hygiene requirements of local authorities and agencies.² Travelers can therefore expect cleaning and hygiene protocols to vary across airports.

Hong Kong International Airport (HKIA) provides a glimpse of some of the measures airports can take to deliver a hygienic and sanitized environment for travelers and employees.³ It's using autonomous cleaning robots to continuously disinfect public areas. The Intelligent Sterilization Robot maintains public toilets and other areas within the terminal, keeping passengers safe with minimal disruption. HKIA is also trialing the use of microbial coatings on handles, seats, smart check-in kiosks and check-in counters, baggage trolleys and elevator buttons.

Cleaner passengers

While airports are concentrating their cleaning efforts on providing a safe and hygienic environment, HKIA believes they should go further. It's testing CLeanTech, a full-body disinfection booth. The short, but thorough, process involves a temperature check before entering a booth for a 40-second disinfection and sanitizing procedure. An antimicrobial coating kills any viruses and/or bacteria found on clothing as well as on the body. Travelers will also be sprayed with sanitizing spray inside the booth, which is kept under negative pressure to prevent cross-contamination. Initially being trialed on staff, it could be rolled out for passengers, too. But it will do little to prevent anyone already infected with COVID-19 from spreading the virus.

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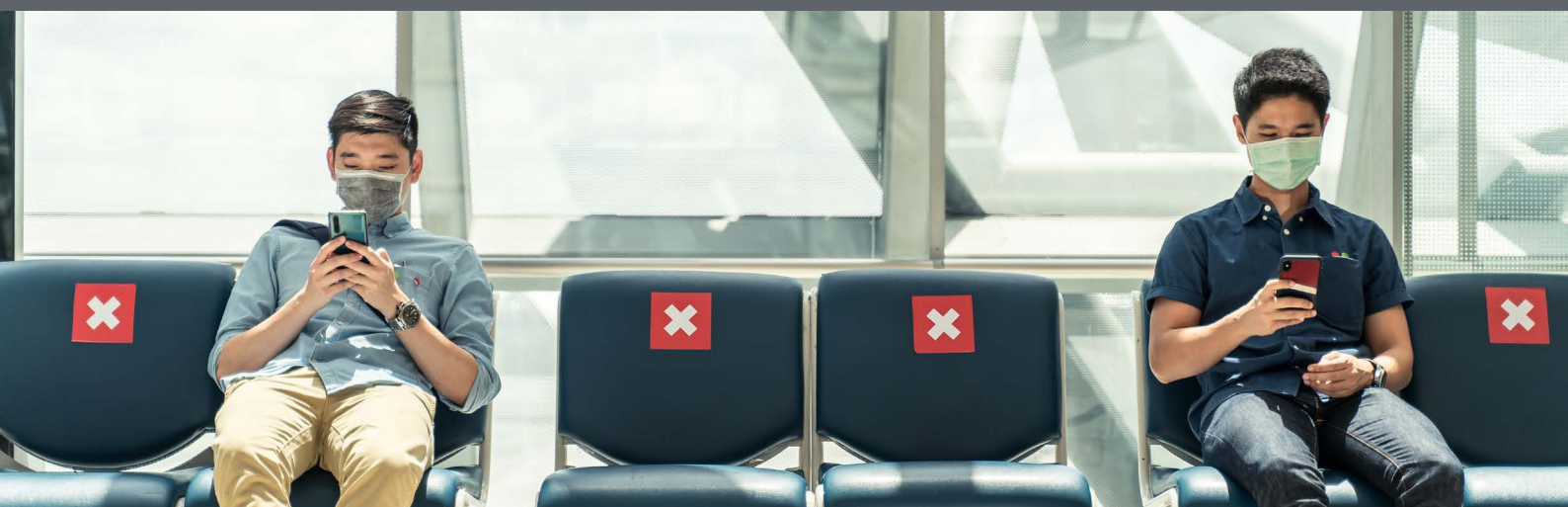
CLeanTech image credit to Hong Kong International Airport



CLeanTech image credit to Hong Kong International Airport

²[Business Travel News](#), May 11, 2020

³[CNN](#), April 28, 2020



Keeping your distance

Airports are already doing a lot to ensure travelers keep their distance from one another. Many, including London Heathrow Airport, have staff managing queues, have installed reminder signs and physical barriers to separate passengers, and have placed markers on the floor. Social distancing throughout airport terminals is manageable when passenger numbers are at historic lows, but it will become more challenging as demand recovers. Indeed, John Holland-Kaye, Heathrow's CEO, considers social distancing at airports to be physically impossible.⁴ And yet social distancing may need to be normal behavior until a COVID-19 vaccine is widely available – and this is likely to be some months away. For now, airports must rely on a series of measures that enable people to move through an airport safely and efficiently.

Social distancing in congestion zones

While airports may succeed in encouraging passengers to keep their distance in many public areas, this becomes more difficult at congestion points like security, immigration and boarding, where passengers can normally expect to queue in close proximity to other travelers.



At U.S. airports, the Transportation Security Administration (TSA) has placed markers on the floor to help passengers keep their distance from one another. It also staggers the use of security lanes where possible. Airports are already looking to technology-based solutions to replace this rudimentary approach to social distancing.

Fastrack security may become a traveler's amenity of first choice to reduce stress and time spent in the airport.

Even before the pandemic, airports in the U.S. were deploying innovations like inside's SafeDistance, which uses 3D LiDAR (Light Detection and Ranging) laser beam technology to manage passenger flow at security checkpoints.⁵ The technology is now being modified to help passengers keep their distance from one another. SafeDistance has been deployed at Charlotte, Indianapolis, Las Vegas, Baltimore-Washington, Miami, Jackson and San Jose airports. While the system is currently used for monitoring purposes only, it's easy to see it developed to deliver real-time alerts and alarms when social distancing is not maintained.

The increased use of biometrics may help speed passengers safely through security and immigration.

Keeping your distance will inevitably result in longer queueing times. Fastrack security may become a traveler's amenity of first choice to reduce stress and time spent in the airport. The increased use of biometrics – scans of eyes and facial features – may also help speed passengers safely through security and immigration. Emirates is working with immigration authorities in Dubai on a biometric passenger journey using facial recognition and pre-screening to deliver a seamless trip through the airport.

⁴BBC, May 1, 2020

⁵Phocuswire, April 22, 2020

Off-airport passenger processing

To reduce the risks of overcrowding when demand recovers, airports may require travelers to complete their pre-flight processing at another location.

This concept is already established. In 2018, Virgin Australia teamed up with Off Airport Check-In Solutions (OACIS) and Amadeus to launch a pop-up check-in and baggage drop service.⁶ The system enables passengers to check-in and drop off their bags for any airline away from the airport. In Dubai, travelers flying can check in for flights, collect boarding passes and send luggage to the airport from a *Dubz Dnata* check-in station in the Dubai Mall.⁷ On arrival at the airport, passengers can proceed direct to security/immigration. In the U.A.E., before the pandemic, Emirates, Etihad Airways and Air Arabia offered passengers a range of off-airport check-in options, with Emirates offering a home check-in from anywhere in Dubai up to 12 hours before departure.⁸

Airports will need to offer a scalable solution for off-airport check-in, particularly if the effects of the pandemic persist. Temporary satellite terminals could be the answer, handling check-in, baggage, immigration and security for certain flights. Passengers could be processed safely in manageable numbers off-airport, before being bused securely and directly to the flight for boarding.

Screening

Clearly passengers should not enter an airport terminal if they have tested positive for COVID-19 or suspect they have symptoms of the virus. Between their arrival at the airport and boarding the aircraft, travelers can expect to be screened on more than one occasion to confirm their health status. Screening can take multiple forms.

London Heathrow airport is trialing technologies that could form the basis for a common global health screening standard.⁹ Airports are concerned that the fragmented approach towards screening may be detrimental to travel's recovery.

Checking temperatures

When passengers enter the terminal, they can expect to have their temperature checked, and will most likely be unaware of this, unless they're stopped by airport staff. Heathrow Airport is trialing thermal screening in the immigration hall to detect elevated temperatures among arriving passengers.¹⁰ The technology uses camera detection systems capable of monitoring the temperatures of multiple people moving through the airport. Passengers will notice no change in experience. If successful, it will be rolled out across the airport.

Doha's Hamad International Airport (HIA) has taken thermal screening to a whole new technological level. The Smart Screening Helmet uses infrared thermal imaging, artificial intelligence and augmented reality display to contactlessly measure travelers' temperatures.¹¹

Travelers can expect to be screened on more than one occasion to confirm their health status.



Smart Screening Helmet image credit to Hamad International Airport

Proof of health presents a number of new challenges for travelers.

⁶[Virgin Australia](#), February 8, 2018

⁷[The National](#), July 24, 2019

⁸[UAE](#), Flying out of the UAE

⁹[Breaking Travel News](#), May 21, 2020

¹⁰[Breaking Travel News](#), May 21, 2020

¹¹[Future Travel Experience](#), May 2020



Proof of health

Passengers may be required to present a written declaration or some other proof that they are fit to travel. To catch a domestic flight in India, travelers must show on the government's *Aarogya Setu* app that they are free of COVID-19 symptoms. Passengers with a "red" status are not permitted to travel. In China, travelers face a health QR code check from a government app, which includes travel history, mobile phone tracking information, medical records and a declaration whether the traveler has come into contact with people suspected or diagnosed with COVID-19 in the past 14 days.

Proof of health presents a number of new challenges for travelers. For example, Cambodia requires arriving passengers to provide a certificate confirming a negative test for COVID-19 within 72 hours of departure. In some countries, COVID-19 testing is reserved for essential workers and people displaying coronavirus symptoms, and not for people wishing to travel overseas. Returning home may also be difficult, particularly if a health certificate is required for travel. Obtaining this at short notice as a visitor in a foreign country may prove complex.

Immunity passports – a proof of immunity certified by a national health authority following a COVID-19 test – may help to ease the return of international travel. But they are the subject of intense debate, with concerns raised data protection and privacy, and how much intrusion is acceptable in the fight against COVID-19.¹² Beyond a confirmation of immunity, immigration authorities should have no need to access a traveler's personal data.

As well as proof of health, Cambodian authorities also require travelers to show they have insurance cover for the duration of their stay, including sufficient medical coverage. Clearly having sufficient insurance cover is good advice wherever people travel.

Health testing

Some degree of health testing will become a standard part of airport security screening procedures. Until a vaccine is widely available, it will help people feel more confident about traveling. As the situation evolves, the screening criteria may change as new testing options become available (or are discredited).

For instance, in April, Emirates conducted on-site rapid COVID-19 blood tests for passengers being repatriated to Tunisia.¹³ Results from tests conducted by the Dubai Health Authority (DHA) were available within ten minutes. But this is one test that may not be widely adopted – the U.S. Centers for Disease Control and Prevention (CDC) recommends against using such an antibody test to diagnose COVID-19, as it may not find antibodies in someone currently infected with the virus.¹⁴

Some degree of health testing will become a standard part of airport security screening procedures.

Companies like in-flight medical provider MedAire are offering a pre-departure COVID-19 screening service, which it has already rolled out in London, Lima, Hong Kong and Los Angeles.¹⁵ Passengers have their temperature checked by medical professionals prior to check-in and complete a questionnaire about their contact history. Additional measures could be included as they become available.

Health testing need not be disruptive or intrusive. Elenium Automation has developed touchless technologies capable of measuring a passenger's vital signs, including temperature, respiratory and heart rates. And in the U.K., the government is backing trials to train dogs to sniff out COVID-19 even before the first symptoms appear.¹⁶ Dogs can already detect certain cancers and are already widely deployed at airports to detect drugs.

As they proceed through the airport, passengers should be prepared to be stopped by staff with concerns about their health.

¹²[Phocuswire](#), May 18, 2020

¹³[Emirates](#), April 15, 2020

¹⁴[CDC](#), *Test for Past Infection (Antibody Test)*

¹⁵[Cirium](#), April 23

¹⁶[Bloomberg](#), May 16, 2020

Navigating the checkpoints

In the U.S., the Transportation Security Administration (TSA) has changed the security screening process to reduce the chances of cross-contamination as demand returns.¹⁷

Airports around the world may adopt some or all of the TSA's security recommendations and procedural changes. In future, travelers should expect to:

- **Keep hold of boarding passes** - Rather than passing to a TSA officer, passengers must now place the boarding pass (paper or digital) on the reader themselves. They must then show the pass for visual inspection.
- **Separate food for screening** - Passengers should put any food in a clear plastic bag and place separately in the tray. This reduces the need for a TSA officer to open carry-on bags.
- **Pack smart** - Take extra care to ensure prohibited items are not packed in carry-on bags. Because of COVID-19, TSA now allows passengers to carry one liquid hand sanitizer container up to 12 ounces, which must be submitted for X-ray screening.
- **Practice social distancing** - To help passengers maintain their distance, TSA is placing distance markers on the floor and staggering the use of lanes where feasible.
- **Wear facial protection** - TSA officers wear facial protection and gloves, and passengers are encouraged to do the same. Instead of putting them in the security trays, passengers must now put belts and items from their pockets directly into their carry-on bags.



As they proceed through the airport, passengers should be prepared to be stopped by staff with concerns about their health.

Enhanced screening increases the time taken to pass through checkpoints

The conundrum of when to arrive at the airport

Enhanced screening increases the time taken to pass through checkpoints, so travelers will need to allow more time to navigate through the departure process. In the U.S., the TSA encourages travelers to arrive at the airport early because of the longer pre-flight process, but this could create problems as passenger numbers increase. To reduce the risks of overcrowding, passengers using Spanish airports are advised against going to the airport more than 90 minutes before departure. In India, which resumed domestic flights in May, chaos ensued as passengers followed official advice to check in at least 60 minutes before departure. Travelers must deal with mixed messages.



As well as a face mask, travelers should carry some disposable gloves. These may provide some extra protection if required to use self-service check-in or when retrieving luggage from the baggage carousel after a flight. When at the airport, try to avoid crowded waiting areas and, when possible, use airport lounges and fast track security.



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¹⁷Luxury Travel Advisor, May 26, 2020

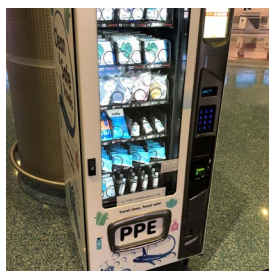


Protection

Personal protection for all

In most airports, travelers can expect to see staff wearing face coverings and working behind transparent protective screens. Social distancing markers, hand sanitizing stations and government health advice will also be highly visible.

Many airports will not allow passengers to enter terminal buildings without a face covering or mask, which should be worn at all times. In the U.S., the TSA encourages passengers to wear face protection; while it does not appear to be mandatory, it's a good habit for passengers to adopt.



Recognizing that PPE has become a travel essential, Las Vegas Airport McCarran International Airport has installed PPE vending machines, selling items like gloves and hand sanitizer. A pack of three disposable masks sells for \$7.50, while a reusable cloth mask costs \$14.50.¹⁸ Passengers will have no reason to be without suitable protection.

PPE vending machine
image credit to McCarran
International Airport

Robots can reduce interaction with airport staff

The need to reduce the amount of interaction between travelers and airport workers will inevitably increase automation within airport terminals, and this should include increased investment in robotic solutions. Airports around the world have been trialing robots for some time. In the context of COVID-19, expect robots to be more regularly deployed to field passenger requests for information and guidance, eliminating the need for them to engage directly with an airport worker. LG's Airstar robot is already a familiar sight at Incheon Airport in Seoul, South Korea. Powered by artificial intelligence and voice recognition technology, Airstar is a contactless, multilingual solution, providing passengers with onscreen information and directions to departure gates, security, restaurants and retail outlets. In future passengers will turn to the nearest concierge robot for help, instead of trying to find the Information Desk.

When it comes to reducing interaction between passengers and airport staff, robots can do more than provide information. At Geneva Airport, Leo has been helping departing passengers with their bags.²⁰ Leo is a fully autonomous, self-propelled baggage robot that can check in bags, print bag tags and transport and load up to two suitcases onto the correct flight.

Contactless experience

Physical check-in at an airport counter may soon become a thing of the past thanks to COVID-19, as airports try to make as much of the journey a contactless experience. They'd prefer passengers to check in online, arrive at the terminal with an electronic boarding pass, and self-bag-drop. But this might not be possible or acceptable for all travelers.

Physical check-in at an airport may soon become a thing of the past.

Self-check-in will remain an option. To reduce the risks of virus transmission between passengers touching the same device, it will, however, need to be a contactless experience. In Australia, Avalon Airport has partnered with Elenium Automation to implement touchless self-service check-in and bag drop.¹⁹ Passengers use head movements or voice recognition to interact with the kiosks and bag drops. Passports are read by holding them in front of a camera. This will, however, not eliminate the need to queue, with its time and social distancing implications.

Robots can do more than provide information.

¹⁸Security Magazine, May 15, 2020

¹⁹Future Travel Experience, May 2020

²⁰Future Travel Experience, May 2020



Services and amenities

Contactless dining and retail

Airport dining and retail must also adapt to COVID-19. Suppliers are implementing health and safety measures and new technology. At some airports, these will be part of a wider airport strategy, such as Seattle-Tacoma International Airport's FlyHealthy@SEA, aimed at ensuring health and wellbeing of passengers, visitors and workers.²¹

Travelers will notice dining and retail services embracing social distancing, sanitization, personal hygiene and PPE. More importantly, they may see changes that allow dining and retail to be delivered with minimal face-to-face interaction. At Seattle Airport, passengers can use Grab's Order at Table and Virtual Kiosk products to make contactless purchases. From virtual menus to order and payment, dining and retail will become a contactless experience.

More importantly, they may see changes that allow dining and retail to be delivered with minimal face-to-face interaction.

A different lounge experience

Many airports have closed their airport lounges. When they reopen, passengers can expect the lounge experience to change. In its lounges, Air New Zealand no longer offers a self-service buffet, replacing it with a table service of packaged snacks and beverages. It's also introduced capacity limits to ensure social distancing.²²

An end-to-end contactless experience

For added traveler protection, Bangalore's Kempegowda International Airport has developed a parking-to-boarding contactless journey.²³ Using technology with more emphasis on health and safety, it minimizes physical contact between passengers and airport staff, while providing a seamless travel experience.

On arrival, passengers must wear face masks and hold an electronic boarding pass. Once inside the terminal, they check in their bags by scanning their boarding pass at a contactless self-service kiosk, self-tag and drop off their bags.

At security, passengers scan their boarding passes at a kiosk, before putting all belongings in a tray (sanitized after every use) for scanning, before themselves passing through a contactless door frame body scanner.

At the departure gate, they face a thermal scan and must display a "you are safe" message on the government's *Aarogya Setu* app. Boarding agents electronically confirm the boarding pass and traveler's ID. Each passenger receives a (new) face mask and sanitizer for use when boarding the flight.

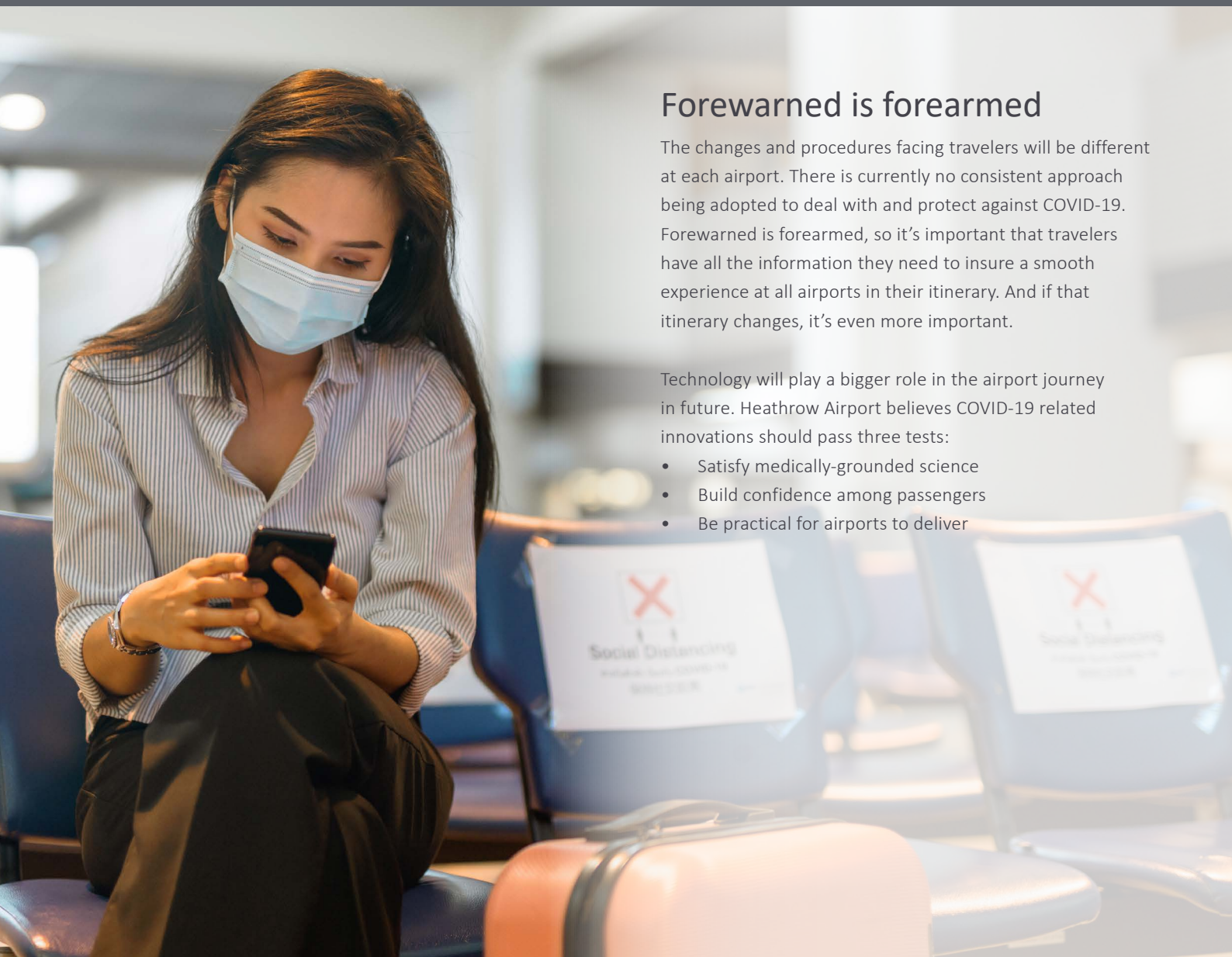
Across the airport terminal, touch-free hand sanitizers, protective screens and safe distance markers have been installed to protect travelers and staff. Bio-waste collection bins have been introduced for disposal of masks and other protective equipment.

The contactless experience also extends to dining and retail. Travelers pre-order food and beverages through their smartphones using a QR code. Payment is made digitally at time of order and the food can be delivered anywhere in the terminal.

²¹Future Travel Experience, June 2020

²²Future Travel Experience, May 2020

²³Future Travel Experience, May 2020



Forewarned is forearmed

The changes and procedures facing travelers will be different at each airport. There is currently no consistent approach being adopted to deal with and protect against COVID-19. Forewarned is forearmed, so it's important that travelers have all the information they need to insure a smooth experience at all airports in their itinerary. And if that itinerary changes, it's even more important.

Technology will play a bigger role in the airport journey in future. Heathrow Airport believes COVID-19 related innovations should pass three tests:

- Satisfy medically-grounded science
- Build confidence among passengers
- Be practical for airports to deliver

Do you have questions or comments regarding this report? Please email [Mike Eggleton](#) to share your thoughts.



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