

# Aviation Operations During COVID-19 Business Restart and Recovery

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### **Airport Operations Business Restart and Recovery Version 2 | March 2021**

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#### **APPENDIX - Table of Amendments**

# 1 Introduction

## Revised Guidance as of March 2021

1.1 COVID-19 has created an unprecedented global challenge, particularly to the aviation industry. The quick spread of the virus has caused governments to rapidly restrict travel and close borders in order to limit the spread. This had a drastic and detrimental effect on airports worldwide. A variety of new measures could become a necessity at airports, based on various phases of the pandemic, related medical criteria coming from recognized health authorities, and stages of business recovery. For airport operators, the main principles are to protect the health and welfare of travellers, staff and the public, to minimize the opportunities for dissemination of communicable diseases, and be able to maintain efficient operations.

1.2 This second edition of the guidance document has been expanded to include information for airports planning to set up COVID-19 testing facilities, as well as information about the safe transport and distribution of vaccines. Existing material has also been reviewed and amended in accordance with new information.

1.3 This guidance document presents considerations in all aspects of airport management and operation to enable the restart and recovery of aviation operations while maintaining the confidence of staff and travellers. The objective of this guidance document is not to expect airports to use all the options provided, but rather give advice on implementation and best practice of measures that might be appropriate according to circumstance.

1.4 This is intended to be a living document with chapters added or amended as additional information becomes available. Each chapter may be read as a standalone document; each is subject to version control.

1.5 We can expect the return to business for the industry to take place in phases:

- Initial restart with limited number of passengers, mainly domestic travel
- Recovery with a slow increase in passenger volume
- Gradual scale-up in capacity
- Return to more normal passenger volumes

This document focuses on best practices and guidance tailored for both the initial phases of this return to business (restart) and the longer-term recovery processes. It is important to note that required measures at airports will need to change and evolve through these phases, and eventually bring the industry to what we may call “the new normal” in terms of the longer-term end-to-end travel process. Worldwide, States and industry regulators will therefore need to ensure to adapt airport processes to changing medical criteria and ensure that airport measures remain aligned with those deployed through other modes of transport and local infrastructures.

## 2 ACI World Guidance Principles

Revised Guidance as of March 2021

ACI World has identified the following key guidance principles to encourage the implementation of practical, efficient and workable health-related and operational solutions for the air transport industry recovery.

Surveys have shown that there is considerable suppressed demand for air travel and tourism but that quarantine is seen as the biggest single impediment to individual travellers.

Air connectivity is essential to enable economic recovery. As States re-start international travel, we recognize that they need effective strategies for managing the risk of active case importation and disease transmission within the air transport system.

Risk management strategies include transmission suppression and control, testing, and other tools such as symptom screening.



### 2.1 COVID-19 Testing may reduce reliance on quarantine

- COVID-19 testing could reduce reliance on quarantine, restriction of air services and movements of persons arriving in countries for essential business and tourism that are, for some States, dependent on inbound tourism for their economic sustainability.
- Measures for health screening and/or testing should minimize interruptions to airport operations.
- On-airport testing should be carefully planned to ensure that it does not result in the creation of crowds, queues and additional dwell time. This would be counterproductive in terms of physical distancing, and also create unnecessary concerns about the safety of the aviation system, unnecessary security risks, and possible safety hazards.
- The ICAO Manual on Testing and Cross-border Risk Management Measures provides a significant step forward in helping States assess and manage risk so as to reduce requirements for quarantine, or even for testing, depending on their specific circumstances.
- When addressing higher risk scenarios and applying testing as part of the multilayer risk management strategy, States should take into account the test result when considering the need for and duration of quarantine.
- Testing should be performed by individuals trained to perform the test at a site approved by the appropriate authorities. The test outcome should be a confirmed test result that the traveller can present to authorities. This may be in digital or manual format, depending on the availability and acceptance of solutions.
- One specific type of test is not recommended over another. The minimum values of 95% for sensitivity and specificity, however, will allow for a wider range of tests to be used that are currently available. This range also allows for the use of rapid antigen tests as a screening device which are more accessible and practical for application in the aviation environment; and are faster and cheaper to use. In addition, it would reserve the more expensive RT-PCR tests for use in clinical settings.

## 2.2 A risk-management approach is needed

- All processes to be deployed to validate the acceptance of a passenger at departure or arrivals should be based on the medical evaluation of information and based on official medical expert evidence.
- All such measures should aim at limiting their potential impact on the overall passenger process.
  - For example, temperature screening has been shown to have limitations and may produce false positives and false negatives. The benefits should therefore be carefully weighed against the risk of creating uncertainty in the safety of the aviation system and additional bottlenecks in the passenger process.
- Reducing risk to zero is impossible, but testing can be one measure in the risk management strategy. In implementing testing as a component of their overall COVID-19 risk management strategy, States should perform a risk assessment using epidemiologic criteria including but not limited to disease prevalence, disease trajectory, national testing strategy, screening capabilities, hospital capacity, and robustness of contact tracing.
- Faced with a fast-evolving pandemic, the risk assessment process must be regularly repeated. Measures should be adjusted depending on the results of the assessment. This may include adding or removing measures.
- States should share risk assessments with other States and harmonize their measures to the extent possible to help with public understanding, confidence and compliance with requirements.

## 2.3 Quarantine requirements should be based on risk and local circumstance

- If States choose to implement quarantine measures for all passengers upon arrival, they should do so based upon a risk assessment and consideration of local circumstances. States choosing to implement a quarantine regime should do so after assessing all the implications, including non-health related effects, and considering them in accordance with their own national decision-making processes.
- On a careful analysis of the risks and evidence, as well as the government's risk tolerance, if the prevalence of infection at the point of origin of the passenger is less than (or equal to depending on risk tolerance) to the local prevalence at destination, and the passenger is not ill and/or has a negative test for COVID-19, governments might consider relaxing, reducing (possibly through a test to release protocol) or avoiding quarantine measures.

## 2.4 Measures should be risk-based and outcome-driven

- Some countries, regions or routes may be considered "low risk" based on epidemiology and, therefore, may not require specific health measures.
- Design of measures should be outcome-driven rather than solution-driven. This means that alternative ways of achieving the same outcome (mitigation of the spread of disease) should be acceptable.

For example:

  - Not all equipment and processes will be necessary or practical for all types of operation.
  - The selection of one type of test to be used globally may result in the unavailability of that test, or an unnecessary burden on the health system.



- Alternative, equivalent measures leading to similar levels of protection should be considered.
- A multi-layered approach may be beneficial, combining elements such as self-declaration, physical distancing, use of Personnel Protective Equipment (PPE) for staff, and additional cleaning protocols.

## 2.5 Coordination between governments and clear communication for the travelling public are key

- To the extent possible, measures should be consistent between countries.
- When measures differ by country, good coordination and clear communication to passengers will be critical to prevent passenger confusion and minimize the negative impact on passenger confidence.
- Uncoordinated measures will likely increase costs for airports, aircraft operators, and other stakeholders.
- Harmonisation of measures between governments will be essential to support restoration of international operations.

## 2.6 Measures should build consumer confidence and be regularly monitored using established benchmarking surveys to ensure that they meet or exceed customer expectations

- Enhanced communications to raise awareness about reducing the spread:
  - updated public websites
  - installation of signage, and
  - making routine public announcements.

## 2.7 Protective measures should be simple and practical

- Protective measures implemented at airports need to consider operational realities.
  - the ACI Airport Health Accreditation (AHA) programme supported by ICAO provides airports with an assessment of how aligned their health measures are with the ACI Aviation Business Restart and Recovery guidelines and ICAO Council Aviation Restart Task Force recommendations along with industry best practices (<https://aci.aero/about-aci/priorities/health/aci-airport-health-accreditation-programme/>)
- Segregation of passengers, staff and/or crew may be possible in certain circumstances, where supported by existing infrastructure.
- Measures may include:
  - physical distancing. This may be possible in the short term but will depend on passenger volumes and terminal layouts. At the start of recovery, staggering the opening of kiosks, desks, bag drops and security lanes may be possible
  - additional cleaning and sanitization
  - wearing of PPE
  - limiting access to public areas
  - providing sanitization stations after each process point, and
  - encouraging health culture, implement staff training.
    - ACI provides several staff training courses related to COVID. (<https://www.olc.aero/product-category/covid-19/>)

## 2.8 Measures should be constantly reviewed for impact, suitability and effectiveness

- Governments should take an incremental, flexible approach to requirements, and regularly reviewing and amending initial measures in response to changing circumstances.
- This will be especially important as passenger numbers increase, and measures such as physical distancing become challenging.
- When measures are implemented, criteria for their removal or replacement are needed.
- Longer-term solutions should incorporate new technologies, stand-off and touchless processes.
- Short-term measures should be removed as longer-term measures are implemented.

## 2.9 Effective collaboration will be key

- Governments and industry should work collaboratively to identify opportunities to increase regulatory flexibility, minimize “touch points”, develop risk assessments and determine suitable measures based upon risk and operational realities.
- Collaboration will be needed between agencies (health, customs, immigration, transport), as well as between countries.
- Countries will need to cooperate to ensure a smooth and coordinated restart.

## 2.10 Responsibilities need to be clearly defined

- When introducing measures, responsibilities need to be defined for purchasing equipment and supplies, carrying out processes and reporting. This includes processes for contact tracing, quarantining and health monitoring.
- Governments should be financially responsible for all health-related new measures and related costs.
- Airport and security staff should not be required to carry out tasks related to health screening.

## 2.11 Regulatory change should be accelerated

- Looking to the future, governments should consider expedited revision of existing or implementation of new regulation to support processes that help reduce passenger touchpoints, such as the use of biometrics, home-printed bag tags, off-airport processing and greater use of e-gates.
- Longer-term changes to processes and regulations should take into account sustainable development of airports to meet climate change goals.

## 2.12 Requirements for health credentials should be

- simple – data required should be the minimum possible to verify identity and health status
- internationally agreed and adopted
- interoperable across borders, and
- flexible, to allow for digital and manual verification of varying formats.

## 2.13 Digital solutions for the verification of health requirements should

- be simple, integrated, interoperable, flexible and scalable
- work cross-border and across stakeholders – with airports, airlines and borders worldwide
- protect customer privacy
- minimize contact, be easy and fast to use, using commonly used technologies so as to facilitate user processes and avoid additional bottlenecks, and
- utilize, to the greatest extent possible, existing commonly used platforms to minimize complexity and costs.

## 3 Management and Planning for Restart

Revised Guidance as of March 2021

### 3.1 Business Continuity

3.1.1 The rapidly evolving situation related to COVID-19 requires a robust response by airport operators to ensure the safety of passengers, staff, and air operations at airports. To achieve this, airport operators should implement existing health-related contingency plans, adapt them if needed, or develop new ones if non-existent.

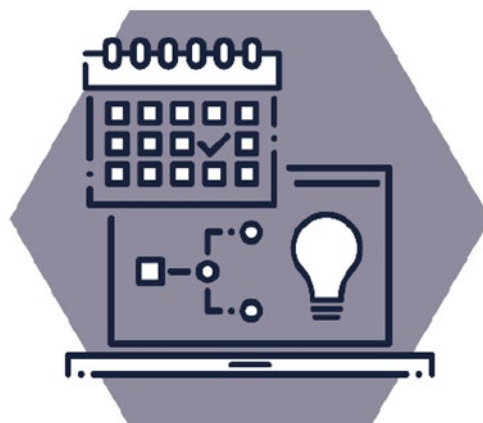
3.1.2 Existing plans should take care of the immediate impact of the health situation on airport operations. However, with significant reductions in operations at many airports, business continuity management is necessary for airport operators to mitigate the financial impacts of such a prolonged crisis.

3.1.3 Business continuity can be viewed in several ways – on one hand, sustaining the operational aspects (aircraft movements and passengers management) of the airport and maintaining safe and efficient operating conditions and, on the other hand, the financial sustainability of the airport, and its business resilience and crisis management structure for addressing a prolonged crisis within the organization itself.

3.1.4 The COVID-19 crisis is affecting both the operational and financial stability of many airports, leading airport operators to identify measures needed to deal with both of these important aspects of the business. It is important to consider the airport as a system and not disassociate the operational aspects from the financial sustainability aspects of the business continuity.

3.1.5 Airport operators should consider the three following points regarding business continuity from an airport system perspective:

- Financial sustainability  
Ensuring financial sustainability through various mechanisms available depending on the ownership structure and regulatory framework specific to the airport.
- Organizational resilience  
Ensuring a resilient and sustainable structure and processes are implemented to address the crisis, as well as continue managing the organization in parallel.
- Operational continuity  
Ensuring that the operating conditions of the airport system (airside/terminals/landside) are maintained in operation to a level commensurate with the scale and volume of operations by air operators.



**Business Continuity Recommendation #1: Consideration should be given to all possible measures available to reduce operating, and possibly investment, costs as well as provide short-term liquidity to the organization, so as to deal with the current crisis.**

**Business Continuity Recommendation #2: Consideration should be given to level-appropriate decision-making processes and management of communications across the organization.**

**Business Continuity Recommendation #3: Consideration should be given to ensuring frequent system-wide coordination with all operational stakeholders.**

## 3.2 Liaison and Coordination

3.2.1 Additional coordination and communication efforts will be required as, for an extended period of time, flight schedules will not be as stable and predictable as usual, and many travel restrictions will still continue to apply in many countries that require a lot of special handling procedures and passenger segregation processes to be managed.

3.2.2 At the same time, airport capacity will only partially be available as apron areas, taxiways and, in some cases, runways are still being used for parking of aircraft of grounded fleets. Also, part of the terminal building might be temporarily closed or decommissioned to recover revenue losses through reducing staffing for maintenance, cleaning, security and customer services as well as saving energy consumption.

3.2.3 Adequate briefing and conference platforms between aircraft operators, other stakeholders and the Airport Operations Control Centre (AOCC)—either via telephone, videoconference or any other agreed means—ensuring that participating airline staff can make key management decisions, should be established.

3.2.4 Particular emphasis should be placed on maintaining an even closer than usual coordination with the Maintenance Operational Control Centre and the OCC of operators, which might involve daily dedicated telephone conferences to align the aircraft return to service plan.

3.2.5 NOTAMs in effect for temporary closure of taxiways or even runways need to be cancelled or adjusted and air traffic control (ATC) needs to be advised well in advance to ensure that temporarily closed runways are back into operation when demand kicks-in. It is also required that all critical stakeholders, service providers and government authorities are well advised in advance on ramp-up schedules and any plans to return temporarily closed facilities into service in order to give adequate advance notice so staffing levels can be adjusted accordingly.

3.2.6 Consider:

**Coordination Recommendation #1: Hosting regular conference calls with the aircraft operators and ground handlers (biweekly, weekly, twice a week, etc.).**

**Coordination Recommendation #2: Issuing regular emails or advisory bulletins to communicate important information to aircraft operators and ground handlers.**

**Coordination Recommendation #3: Issuing Regular Schedule Update Notices to advise stakeholders on extra flights cancellations or schedule/equipment changes.**

### 3.3 Airport Capacity Analyses

3.3.1 It is expected that airline traffic will recover gradually and that the pre-COVID-19 level of airport capacity will not be reinstated overnight. Airport infrastructure and services will reopen in phases as demand for air transport picks up. Additional processes may also need to be implemented in terminals to maintain physical distancing, with an impact on passenger throughput limits.

3.3.2 As such, it will be paramount to ensure that airport capacity recommissioning is in step with airline schedules and phased and communicated in an appropriate manner.

#### **Capacity Recommendation # 1**

**Airport operators should conduct a thorough analysis of their available capacity**

3.3.3 Capacity analyses should be conducted on a regular basis and updated whenever airport facilities and services are being recommissioned, when there are changes in the patterns of demand, or when new operational processes impacting capacity are being implemented.

3.3.4 As a first step of planning for restart, airport operators need to thoroughly analyse the impact of additional processes related to COVID-19 mitigation on available capacity. For terminal operations, the need to maintain physical distancing during initial phases of recovery may impact passenger throughput capacity, with a ripple effect on other systems, including aircraft parking stands and airfield operations. Experience has shown that the physical distancing requirements imposed by health regulations as well as the increased number of checks and document controls required at check-in or prior to boarding can have a significant impact in processing times.

3.3.5 The capacity analysis should encompass, without being limited to:

- a) runway capacity
- b) apron capacity
- c) terminal capacity, with sub-analyses for check-in, gates, boarding procedures, security, immigration, and baggage reclaim areas, and
- d) operational and environmental limits (curfews, movement caps, noise, etc.)

3.3.6 In order to understand the full impact of COVID-19 mitigation measures, cross-organisation input and consultation with relevant stakeholders involved in daily operations, such as air traffic control, aircraft operators and ground services, will be essential.

## **Capacity Recommendation # 2**

### **Schedule-facilitated and slot coordinated airports should ensure that their capacity analysis informs the most adequate coordination parameters for allocation purposes**

3.3.7 Consistent with the Worldwide Airport Slot Guidelines (WASG), airport operators should ensure that their capacity analysis informs the declaration of the most appropriate coordination parameters, which represent the maximum capacity available for allocation at a given level of service considering the functional limitations at the airport.

3.3.8 Reduction in capacity at slot-coordinated airports could impact aircraft operators' historic schedules. In this context, it is important to ensure that Coordination Committees, where they exist, are consulted.

3.3.9 The coordination parameters establishing the scheduling and capacity limits that can be coordinated or facilitated in a specified period should then be provided to the slot coordinator/facilitator.

## **Capacity Recommendation # 3**

### **Information sharing between airports and aircraft operators regarding operational plans and capacity during recovery**

3.3.10 To make timely decisions regarding the recommissioning of facilities and services, ongoing dialogue between airport operators and aircraft operators will be crucial. Receiving reliable flight schedules and thorough information on the aircraft operators' recovery plans will be essential to ensure that the supply of airport capacity is aligned with airline demand.

3.3.11 There are several risks to airport operators not receiving flight schedules in a timely manner, with impacts that would mostly be felt by passengers and aircraft operators. Providing less capacity than actual airline demand may lead to unnecessary flight scheduling constraints, airport congestion and delays, while providing more capacity than actually needed would increase the cost base of airports and induce an avoidable upward adjustment of airport charges passed to aircraft operators and passengers.

3.3.12 Airports are designated based on a demand and capacity analysis. Depending on the duration of the crisis and on local circumstances, the fall in airline demand could incite some airport operators to consider a change of designation (e.g., from Level 3 to Level 2). The Coordination Committee, if it exists, should be consulted to evaluate the best option based on local factors.

## **3.4 Care of Decommissioned Assets**

As businesses, airports are characterized by high fixed costs associated with their infrastructure and other fixed assets. These must be managed and maintained continuously during their lifespan, to ensure that they remain usable even if they have been temporarily decommissioned.

### **3.4.1 Temporarily decommissioned assets**

3.4.1.1 Airports continuously monitor every asset daily when in service, according to a detailed preventive maintenance plan, and it is no less important to inspect temporarily decommissioned assets. When decommissioning assets over a lengthy period, Asset Care Management would change from a maintenance approach to one of inspection and monitoring. For instance, building systems in terminal buildings that are not in use may deteriorate, and daily inspection of buildings and systems is required to prevent incidents when recommissioned. As another example, in colder climates, decommissioning without precautions could lead water systems to freeze which may

cause major damage and create additional costs and delay when recommissioning the area. Continuous visits of all decommissioned sites are important to monitor any anomalies such as noise, water, heat and odours.

#### **3.4.2 Restaurants and retail stores**

3.4.2.1 The sudden closure of terminal businesses could precipitate some tasks that were planned at later dates. Restaurants and stores gas and electrical supply could necessitate the need to be shutoff throughout the closure and inspected before returning to operation. The cleaning of restaurants grease traps also needs to be tended to, immediately following the decision of a lengthy closure in order to prevent eventual risks of clogging or fire. Adequate disposal of perishable goods should equally be tended to so as to avoid any mould or bacterial growth during the period of closure.

#### **3.4.3 HVAC Systems**

3.4.3.1 Most HVAC systems are not conceived to remain shut down, and it is important to activate them on a regular basis during inspections to avoid unnecessary repairs and disruption during the restart.

3.4.3.2 In addition, some HVAC systems are often used to clear smoke should a fire occurs within the infrastructure. Care should be taken to mitigate this risk should the HVAC system be temporarily or permanently shut down.

#### **3.4.4 Electromechanical equipment**

3.4.4.1 Electromechanical equipment—such as boarding bridges, escalators and elevators—that are shut down must be inspected and periodically tested or started up. These requirements are different from the regular preventive maintenance plan due to issues such as lack of usage, humidity, etc.

3.4.4.2 Inspection of such decommissioned equipment is essential before returning them to service for passenger use, based on manufacturers' recommendations and applicable National Building Codes.

3.4.4.3 Moreover, depending on the use of certain equipment such as escalators, either by the remaining passengers or employees, it is convenient to categorize them adequately. Maintenance protocols per category are to be defined and deployed, to make sure recommissioning goes smoothly. Thinking only of saving energy costs could be much more expensive in the longer run if the minimum maintenance required is not performed.

3.4.4.4 In cooler and colder climates, it is imperative that power be maintained in all outdoor-based equipment such as jetways and pre-conditioned air units. This will maintain dryness and prevent humidity and condensation build up in the control box and avoid for the equipment to age prematurely. It is also important for escalators and elevators to be periodically inspected and put in function in order to prevent bearings and rollers from flattening.

### **3.5 Operational Readiness**

3.5.1 Adequate planning is essential in preparation for the early days and weeks of restart of passenger flights, including constant attention to business continuity planning. This is equally true in the subsequent phases as operations build up.



3.5.2 Relationships with air carriers at an airport will be key, especially as their intentions may change rapidly. Liaison with contractors, unions, the air navigation service provider (ANSP) aircraft operators and ground handling service providers will also be important, as will issues of procurement of supplies, while the COVID-19 crisis continues.

3.5.3 Slot-controlled airports should ensure capacity analysis and capacity declaration are conducted regularly, maintained current and communicated.

3.5.4 When planning to restart or increase significantly the aircraft movements and passenger operations on the airport it will be important to ensure adequate operational readiness and testing of airport infrastructure and systems that may have been shut down or have undergone partial, restricted or no use for a prolonged period of time.

3.5.5 So as to adequately prepare for and manage this critical phase, airport operators should go through a thorough operational readiness assessment, similar to the process conducted when opening a new terminal, in particular for all elements of the airport system that have not been engaged in standard operations for a prolonged period of time. This process should be conducted as part of the overall ramp-up and restart plan that should be established by the airport operator.

3.5.6 Many methodologies exist to conduct this type of operational readiness testing. In practical terms, there are often two or three main stages to this process, as described in the table below. It is important to note that this process may have to be undertaken numerous times as the procedures and operating modes, related to the evolving health situation, are likely to continuously evolve over time.

Phase	Process	Description
1	Planning	This phase allows for the development of the operational assessment processes to be established and formalised, unless already existing. The assessment processes are most likely to be in the form of checklists to improve ease of use.
2	Execution and stabilization	This phase, which is to be initiated only once the operations are about to restart, includes a verification of the individual elements that are identified in the operational testing processes. Should any issues be identified, these would need to be addressed and stabilized allowing for a transfer to standard operations.
3	Operation	This phase is the result of the operational readiness testing and stabilization process whereby the normal operating conditions are regained, or as a minimum the modified operating conditions, for the specific element that is assessed.

3.5.7 The operational readiness assessment should be conducted on both infrastructures and systems (e.g., hold baggage sortation system, CUTE sets at check-in counters and gates, apron surfaces, runway lighting systems, potable water access points, etc.) that have not undergone normal operations for a period of time as well as on critical operational processes (e.g., rescue and firefighting (RFF), wildlife management, work site safety, etc.). All asset (infrastructure and systems) and process owners should be involved in the establishment of the testing check lists as well as participating in the field evaluation.

3.5.8 Given the number of stakeholders operating at airports, it is important that the airport operators coordinate the overall operational readiness testing processes so as to be sure to have the overall picture of the airport system prior to restart. An overall asset and process readiness dashboard should be maintained and updated by the airport operator following each phase of ramp-down and ramp-up.

3.5.9 An equally important part of the operational readiness process will be to ensure that all operational staff are introduced back into the daily operations in such a way as to be fully ready to fulfil their tasks safely and according to established procedures or any new requirements that may have been developed. The airport operator should have a central role in consolidating a comprehensive understanding of the level of preparedness and competency of its own staff as well as that of all key stakeholders operating on the airport (ATC, ground handling, RFF, security, etc). See chapter 6 for further information on staff preparedness.

## 4 Safety and Operations

Revised Guidance as of March 2021

Assuring the safety of airside operations on the entire aircraft movement area, i.e., aprons, taxiways and runways, is a critical pre-condition for restarting operations and for the build-up of traffic thereafter.

At many airports, few aircraft operations (other than cargo) have taken place. Simultaneously, they have seen large-scale parking of unused aircraft which has brought its own problems.



The heavily reduced use of airside areas may have created gaps in the readiness of airside infrastructure, facilities, equipment and systems, which need to be restored to good condition prior to ramp-up of operations following an operational readiness programme (see chapter 3). In addition, the staff providing airside services must be ready to resume operation, and re-trained if necessary. See Chapter 6 hereto.

On the positive side, the reduction in number of movements may present an opportunity to increase airport operational safety, both on the airfield (manoeuvring area) and on aprons. For example, due to reduced movements, a minimum time separation of movements can be enacted with increased distance between aircraft, this may translate into reduced collision risk. Discussions with ATC may enable such operational procedures to be introduced. Special operations may also be introduced for detailed inspections of the movement area to clean up and reduce foreign object debris (FOD). Ground handlers may also be allowed more time per turnaround, resulting in less pressure on safety, in discussion with aircraft operators.

Opportunities also exist to focus on more environmentally friendly operations, which may also increase efficiency. For example, replacing the auxiliary power unit (APU) while the aircraft is at the gate by Aircraft Ground Energy Systems (AGES): this can save fuel consumption by aircraft operators, therefore reducing emissions and improving local air quality. ACI World Aircraft Ground Energy Systems Simulator (AGES-S) calculates both environmental and economic benefits supporting airports to develop a business case to invest in this type of infrastructure/equipment.

### 4.1 Safety Implications with Parked Aircraft

4.1.1 Long-term parking of aircraft may lead to risks to infrastructure and safety, including:

- damage from the use of pavement in a way not originally intended
- aircraft damage, especially the risk of collision during parking manoeuvres with minimum clearances
- runway or taxiway incursions, and
- issues around aircraft access and availability.

4.1.2 To provide advice on mitigation, ACI produced an Advisory Bulletin on Mitigating the risks created by overflow aircraft parking. ([https://aci.aero/wp-content/uploads/2020/04/200423-Airfield-Parking-Advisory-Bulletin-FINAL\\_001.pdf](https://aci.aero/wp-content/uploads/2020/04/200423-Airfield-Parking-Advisory-Bulletin-FINAL_001.pdf))

4.1.3 This section deals with safety risk assessments to make sure that all pavements that may have been used for parking (especially taxiways and runways which are not designed for parking) are safe for their intended purpose, before and after restarting operations.

4.1.4 Considerations prior to restarting operations:

- Assess pavement strength: It is important to assess the pavement strength to ensure the pavement can accommodate the loads that it is intended to. Airport operators to check Aircraft Classification Number (ACN) and Pavement Classification Number (PCN) compatibility.
- Monitor pavement condition: Airport Operations should complete a visual check of all surfaces that were used to park aircraft. In cases where aircraft were parked on taxiways and runways, Airport Operations should take photographs of the airfield while the aircraft are parked in the different locations and after the aircraft have been moved. These photos can be used later if there is some structural distress found in the pavement (if there is reason to bill a particular airline for that repair). The airport operations team should also conduct a specific check of the same area about one month after return to normal operations and check the areas to see whether there have been any changes to the pavement.
- Clean pavements: After aircraft have been moved off a taxiway or runway, the areas should be washed down and brushed or swept to remove any oils, grease or other chemicals that might have been deposited on the surface as a result of maintenance activity or leakage, and also remove any FOD that might have been deposited on the surfaces while they were being used as parking locations.
- Review procedures: Procedures to use, access, inspect and maintain infrastructure may have been changed during the COVID-19 outbreak. Airport operators should review all the related procedures and adjust them accordingly.
- Coordination: Planning for restarting operations requires enhanced coordination with all the stakeholders. Airport operators should ensure all their actions and safety risk assessments are coordinated with relevant stakeholders.

4.1.5 Considerations after restarting operations:

- Monitoring of pavement condition: Airport Operations staff should periodically conduct specific checks of the areas where aircraft were parked after normal operations to see whether there had been any changes to the pavement. It is recommended to repeat these checks at least twice a month, and a special continuous monitoring schedule should be set up for those areas. When inspecting the pavement, deterioration that should be documented includes, for example:
  - depressions on flexible pavements under wheels
  - ripples and bumps
  - puncturing, and
  - damage from fluid leakage.

## 4.2 Recommissioning Aircraft

4.2.1 When an aircraft is being returned to service after long-term parking or storage, the appropriate checks and tests to ensure airworthiness must be performed by its operator. All systems will be operationally tested according to the manufacturer's instructions and regulatory requirements. Airports are recommended to produce a coordinated plan for aircraft returning from long-term parking or storage. Some of the parked or stored aircraft will require taxi tests, engine ground run-ups and/or check flights before they can be returned to service. Some aircraft might

require high-volume defueling or fuel system flushing and tire replacements before they can be moved or towed.

4.2.2 Airport operators should work with aircraft operators to identify the sequence and forecasts for re-entry into service of aircraft. This sequence should be developed into a plan focusing on which parked aircraft will be worked on and when, and what type of tests and facilities they will need before being returned to service. The plan should be initiated by the aircraft's operators (maintenance and flight operations) and coordinated with related stakeholders, including ATC and airport airside management and the ground handling service providers. It should include an aircraft towing plan.

4.2.3 To complement the plan, it is recommended that airports issue an operational directive or local procedure on aircraft returning to service after long term parking or storage.

### 4.3 Recommissioning Aprons, Taxiways, Runways, Lighting, Markings, Signs, Facilities, etc.

Airport operations should complete a visual check of all surfaces that were used to park aircraft and that may have been damaged by long-term parking. In cases where aircraft were parked on taxiways and runways, Airport Operations should take photographs of the airfield while the aircraft are parked in the different locations and after the aircraft have been moved. These photos can be used later if there is some structural distress found in the pavement (if there is reason to bill a particular airline for that repair). Airport Operations should conduct a specific check of the same area about one month after normal operations restart and check the areas to see whether there had been any changes to the pavement.

Specific recommendations are in four tables below: Generic (common to all areas), Aprons, Taxiways and Runways.

#### 4.3.1 Generic

<b>Problem</b>	<b>Cause(s)</b>	<b>Possible Impact</b>	<b>Possible Solutions/ Recommendations</b>
<u>Capacity</u> ➤ Aprons ➤ Taxiways ➤ Runways	Stored, unused aircraft	<ul style="list-style-type: none"> <li>▪ Reduced capacity</li> <li>▪ Reduced efficiency</li> <li>▪ Increased turnaround times</li> </ul>	<i>See specific sections</i>
<u>Maintenance</u> ➤ Aprons ➤ Taxiways ➤ Runways	Less resources due to low traffic volume and economic crisis  Systems not used or disconnected	<ul style="list-style-type: none"> <li>▪ Fewer maintenance personnel available to conduct works due to taking mandatory leave, absence and physical distance requirements</li> <li>▪ Out of service of electric systems</li> <li>▪ Increased safety risks in case of reduced performance of markings/signs/ lighting</li> <li>▪ Deterioration of surface due to long-term static loads</li> </ul>	<ul style="list-style-type: none"> <li>▪ Identify operational and safety risks prior to restarting operations (Checklists should already be available for normal operations)</li> <li>▪ Take mitigating measures plan to control risks</li> <li>▪ Necessary (preventive) maintenance works to be completed prior to restoring operations</li> <li>▪ Maintenance planning and priorities to be re-evaluated, different scenarios considered (temporary/short/medium/ long term)</li> <li>▪ Obtain simplified authorization process with CAA if possible.</li> </ul>

		<ul style="list-style-type: none"> <li>Increased risk due to reduced inspection capability (resources)</li> <li>Increased risk of compliancy issues</li> </ul>	If that works, propose to make it the new standard
<b>Works</b> <ul style="list-style-type: none"> <li>➤ Aprons</li> <li>➤ Taxiways</li> <li>➤ Runways</li> </ul>	Lack of resources	<ul style="list-style-type: none"> <li>Increased risk due to reduced inspection capability (resources)</li> <li>Risk of compliancy issues</li> </ul>	<ul style="list-style-type: none"> <li>Identify operational and safety risks prior to restarting operations</li> <li>Take mitigating measures plan to control risks</li> <li>Consider temporary/quick vs long term/definitive solutions</li> <li>Obtain simplified authorization process with CAA if possible. If that works propose to make that the new standard</li> </ul>

#### 4.3.2 Aprons

<b>Problem</b>	<b>Cause(s)</b>	<b>Possible Impact</b>	<b>Possible Solutions/ Recommendations</b>
Capacity	Stored, unused aircraft	<ul style="list-style-type: none"> <li>Reduced apron capacity</li> <li>Less efficiency due to towing/manoeuvring</li> <li>Increase of turnaround times</li> </ul>	<ul style="list-style-type: none"> <li>Plan availability with priority for contact stands and remote stands close to terminal to reduce the number of buses needed</li> <li>Priority to fully equipped apron parking stands (fixed electrical ground power, pre-conditioned air, fuel pit, airbridge) to increase handling performance, reduce turn-around times and reduce workload for ground-handlers</li> <li>Apply extra taxi/towing time if extra ground movements foreseen. May influence turnaround times</li> <li>Apply longer turnaround times and take this into account for capacity predictions/monitoring</li> <li>Update target off-block time algorithms and make maximum efforts to update</li> </ul>
Maintenance/ Apron	<i>See Generic/ Maintenance</i>	<i>See Generic/ Maintenance</i>	<i>See Generic/Maintenance, plus:</i> <ul style="list-style-type: none"> <li>Inspection of pavement condition</li> <li>Check of signs and markings</li> <li>Check of apron lighting</li> </ul>
Works /Apron	<i>See Generic/ Works</i>	<i>See Generic/Works</i>	<i>See Generic/Works</i>
Fuel systems	Specific maintenance required to restart fuel apron facilities	<ul style="list-style-type: none"> <li>Risk of interrupted fuel supply (due to fuel contamination or clogged filters)</li> </ul>	<ul style="list-style-type: none"> <li>Check with HFS operator and fueller before restarting operations</li> </ul>

Flight waste management	Risk of virus spread	<ul style="list-style-type: none"> <li>▪ New measures could be necessary for aircraft waste management, catering, water supply, waste management infrastructures, systems or procedures</li> </ul>	<ul style="list-style-type: none"> <li>▪ Guidelines or checklist to be checked and amended accordingly</li> <li>▪ Awareness campaign for all stakeholders involved (e.g., GHs, airline crews, maintenance personnel)</li> <li>• <i>refer to local health regulations</i></li> </ul>
Potable Water	Specific maintenance may be required to restart potable water supply	<ul style="list-style-type: none"> <li>▪ Risk of water contamination</li> </ul>	<ul style="list-style-type: none"> <li>▪ Check infrastructures and vehicles for quality including (bacterial) contamination</li> </ul>

#### 4.3.3 Taxiways

Problem	Cause(s)	Possible Impact	Possible Solutions/ Recommendations
Capacity	Stored, unused aircraft	<ul style="list-style-type: none"> <li>▪ Reduced taxiway/taxi lane capacity</li> <li>▪ Less efficiency due to towing/manoeuvring</li> <li>▪ Increase of turnaround times</li> </ul>	<i>See Generic/Capacity, plus:</i> <ul style="list-style-type: none"> <li>▪ Make impact assessment for normal and LVP operations <ul style="list-style-type: none"> <li>• increased taxi/towing times</li> <li>• increased turnaround times</li> </ul> </li> </ul>
Maintenance/ Taxiways	<i>See Generic/ Maintenance</i>	<i>See Generic/ Maintenance</i>	<i>See Generic/Maintenance, plus:</i> <ul style="list-style-type: none"> <li>▪ Inspection of pavement condition</li> <li>▪ Check of signs and marking</li> <li>▪ Check of airfield lighting</li> <li>▪ Check of energy supply systems</li> <li>▪ Check of systems protecting for RWY incursions and ASMGCS</li> <li>▪ Check presence of mobile obstacles</li> <li>▪ Check presence of material interfering with (ILS) sensitive areas</li> </ul>
Works/ Taxiways	<i>See Generic/ Works</i>	<i>See Generic/Works</i>	<i>See Generic/Works</i>

#### 4.3.4 Runways

Problem	Cause(s)	Possible Impact	Possible Solutions/ Recommendations
Capacity	Stored, unused aircraft	<ul style="list-style-type: none"> <li>▪ Reduced runway capacity</li> <li>▪ Apron management service, AMAN and DMAN change</li> <li>▪ More staff for RFF services</li> <li>▪ More staff for inspections and Wildlife management</li> </ul>	<i>See Generic/Capacity, plus:</i> <ul style="list-style-type: none"> <li>▪ Plan availability with evaluation of RFF category needed</li> <li>▪ Apron management in normal and Low visibility conditions in concert with ANSP</li> <li>▪ Make impact assessment for normal and Low visibility operations <ul style="list-style-type: none"> <li>• increased taxi/towing times</li> <li>• increased turnaround times</li> </ul> </li> </ul>

Maintenance/ Runways	<i>See Generic/ Maintenance</i>	<i>See Generic/ Maintenance</i>	<i>See Generic/Maintenance, plus:</i> <ul style="list-style-type: none"> <li>▪ Inspection of pavement condition</li> <li>▪ Check of signs and marking</li> <li>▪ Check of airfield lighting</li> <li>▪ Check of energy supply systems</li> <li>▪ Check of systems protecting for RWY incursions and ASMGCS</li> <li>▪ Check presence of mobile obstacles</li> <li>▪ Check presence of material interfering with (ILS) Sensitive areas</li> <li>▪ Check NAVaids for unused runways during reduced operations period</li> </ul>
Works / Runways	<i>See Generic/ Works</i>	<i>See Generic/ Works</i>	<i>See Generic/Works</i>

## 4.4 Bringing back Furloughed Staff

4.4.1 Airport staff may have been furloughed for short or longer periods of time. Consequently, skills can be reduced or even forgotten when staff return to work, despite previous qualifications. Also, in some cases airports and airport stakeholders might hire staff on temporary contracts to have an agile and flexible set-up in terms of up- or down-scaling of operations.

4.4.2 Airports are advised to restart in a controlled environment, where the risk of safety incidents related to unpractised experience is reduced.

4.4.3 Assessment of retraining or recertification of staff is required, depending how long they have been away from the job is highly recommended. For staff training and during initial phases of recovery, use of online and virtual classrooms should be maximised when possible. Did you know that ACI provides several training programmes that can assist with re-skilling staff? (<https://aci.aero/global-training/>)

4.4.4 Airports are advised to map safety critical functions, the associated and mandatory skills and qualifications, and the criticality of those. Permanent as well as temporary staff should be given necessary training corresponding with those requirements and obtain status on the defined training before being tasked with safety critical work.

4.4.5 Based on criticality—staff working in critical zones of the airport such as essential maintenance and/or inspections on the manoeuvring area, or with asset management of critical CNS/MET infrastructure, for instance—should be given high priority and should hold status on defined, mandatory skills and qualifications before any task is conducted. Given the circumstances, an additional proficiency check could be considered a useful method in a controlled recovery process.

4.4.6 Limited access to the manoeuvring area for safety reasons could be considered another effective measure in terms of reducing the likelihood of an unsafe event during the phase of recovery.

4.4.7 Expiration of licenses is a topic that airports might want to discuss—and consider potential extenuating circumstances for—with their civil aviation authorities (CAAs). In preparation for this dialogue, it is recommended to support any proposed changes to defined requirements and/or timeframes with the results of a Safety Risk Assessment.



4.4.8 Airports should coordinate with the wider community of airport stakeholders, including airlines and ground handling service providers, to ensure that a similar approach to bringing back temporary or long-term furloughed staff is applied for their employees.

## 4.5 Human Factors in Airside Safety Management

4.5.1 Given the extraordinary conditions that the crisis have brought upon aviation and communities at large, airports are advised to take human factors into consideration, since mental distractions can affect staff behaviour in various ways, for example:

- the consequences of the epidemic might cause concerns related to short-term and long-term perspectives related to employment, health and safety of colleagues, family and relatives, etc., and
- airports are encumbered by parked aircraft in various locations not normally used for that purpose. As a result, some airports have seen an increase in aircraft/airport damages due to human factors.

4.5.2 Awareness campaigns are highly recommended as a mitigation, promoting the importance of mental fitness and awareness of how mental distractions can affect safety behaviours and create risks.

## 4.6 Rescue and Firefighting (RFF)

### 4.6.1 **Planning**

4.6.1.1 In the case where an airport has ceased operations all together, preparations for opening the aerodrome should be communicated at the earliest possible time, ideally four weeks, prior to full operations. The following recommendations apply when resuming RFF operations after a full or partial shutdown. Operators should establish an operational resumption plan that should cover RFF activities for the protection level to be provided, including the items listed below.

4.6.1.2 ICAO Annex 14 and ICAO Doc 9137, Part 1 require that the level of protection must be commensurate with the fuselage length and size, and frequency of aircraft operating to the aerodrome, which leads to determination of the RFF Category and the number of vehicles required for that category. Notification of any change in Category should be communicated to ATC and pilots operating into the aerodrome by NOTAM.

4.6.1.3 Planned aerodrome movement activity should be provided as early as possible to the Rescue and Firefighting Service (RFFS), to identify the number of staff required at a time to maintain the level of protection for the operated aerodrome RFF Category.

4.6.1.4 Sufficient rescue and firefighting staff should be available during operational hours to be able to operate vehicles and equipment at its capacity, meet response times, and discharge the required number of agents. The operational hours for duty shifts should be scheduled such that there is enough time for shift rotation.

### 4.6.2 **Staff**

4.6.2.1 On returning to work, all staff should be briefed on the activities to be performed with regard to RFF Category as well as their responsibility and operational hours. Staff who were asked to stay off duty should undergo validation of their skills and competence. Briefings should include any changes to normal operating procedures related to COVID-19 protection measures, including elements such as the use of PPE or disinfection protocols for vehicles.

4.6.2.2 All RFF personal protective equipment should be inspected and if necessary, cleaned prior to use.

#### 4.6.3 **PPE and Cleaning**

4.6.3.1 As with other staff and facilities, new measures should be implemented to assist with the prevention of the spread of viruses. These include:

- hand-washing facility with running water and soap or provision of alcohol-based hand sanitizers
- maintaining physical distancing, and
- for staff and teams working on shifts, encouraging contact-free handovers, i.e., via telephone, videoconference and electronic logs.

### 4.7 **Equipment**

4.7.1 Prior to restart, serviceability and equipment inspection and maintenance should be conducted on all equipment and appliances. This should include:

- all fire tenders to be tested to guarantee their acceleration and speed tests
- checking of rescue equipment on appliances. Ladders, firefighting PPEs, self-contained breathing apparatus (SCBA) and media, etc. to be checked
- all aircraft emergency response procedures to be reviewed, and
- ensure that reserve of foam concentrate is equivalent to double the quantities identified in Table 2-3 of ICAO Doc 9137 is available for vehicle replenishment purposes. Complementary agents should be equivalent to 100%.

### 4.8 **Aerodrome Inspections**

4.8.1 Where areas of an airport have been unused, inspections should be carried out, including:

- emergency access route/gate inspection
- serviceability of perimeter roads
- inspection of critical rescue and firefighting access area (CRFFAA)
- inspection of water hydrants and supply systems, including pressure flow test, and
- aerodrome lighting and signage.

4.8.2 Airport operators may take advantage of the reduction in activity on the airport to conduct specific inspections and cleaning activities of airside areas that can be rendered more complex in normal operating conditions.

### 4.9 **Wildlife**

4.9.1 The reduction or suspension of operations may lead to increased presence of wildlife on and around the airport and an increased risk of wildlife related incidents.

4.9.2 Wildlife hazard management during changed operational circumstances should include risk assessment, mitigation actions, recovery planning (resumption) and stakeholder management. What follows is basic guidance material, and subject to change depending on the local circumstances of airports (i.e., geography, climate, presence of local species, etc).

a) Resumption: What to consider preparing for return to normal

- Revise/update Safety Risk Assessment and related control measures:
  - If necessary, adapt control measures based on the revised Safety Risk Assessment.
  - If there have been limited wildlife management activities during the outbreak, pay special attention to consequences such as:
    - risk of increase of (especially high risk) species
    - habituation: species becoming accustomed to the absence of dispersal activities, and
    - bird nests might occur, especially during their mating season.
- Maintain and act according to regular safety procedures after a runway is put back into use.
- Regular safety procedures should include detailed inspections to check for (remains of) wildlife.
- Stakeholder management—What to communicate and with whom?  
Inform home carrier, other operational aircraft operators and relevant stakeholders about wildlife measures taken.
- Ask aircraft operators (technicians) that make use of parking stands, on runways, taxiways and the APRON for instance, to pay extra attention to possible bird nests at the aircraft including in the engines if these are not covered, noting that crow and pigeon species might try to build nests. Look out for birds flying to and from parked aircraft.

b) Mitigation action: Preparing for increased operations

- Continue active wildlife control in line with Wildlife Hazard Management Plan (WHMP). Do not give wildlife any chance to establish itself on the runway, taxiway, APRON, equipment or buildings.
- Continue regular wildlife counts (business as usual). Keep collecting data and guard liability of previous data by systematically continue counting/logging.
- Pay special attention to the removal of nests of territorial birds that come back yearly to nest in the same area, e.g., lapwings.
- Execute mowing activities while there is little risk of attracting wildlife that is a potential threat to incoming or departing aircraft.
- After mowing activities, give birds of prey the opportunity to land on and clean the meadows (needs to be managed by experienced staff).
- Take time for detailed inspections, searching for possible “hotspots” that attract wildlife, especially in areas where access during normal operations is limited.
- Log every habitat hotspot (preferable on a digital device), produce and manage an overview that is up to date.
- Prevent the return of undesirable flora that might attract wildlife.
- Pay special attention to the growth of bushes at edges of meadows, around tunnels and emergency exits on and around airside—remove bushes carefully preferably including roots.
- Search for standing water, weeds (e.g., hogweed), soil irregularities (that might attract wildlife in any way (e.g., burrows of moles and rabbits).
- Take time to repair fences to keep wildlife out.
- Take time for detailed inspections of water bodies and remove water plants, overgrowth, etc., according to local environmental law.
- If necessary and legal, it may be a good moment to make use of lethal methods, making sure to remove carcasses to avoid scavengers.

## 4.10 Protection of Airside Operations Staff

4.10.1 Health measures should be continued as possible and as long as needed. These may include:

- Limiting on-site operations and maintenance staff to those required for safety-critical functions or to those carrying out functions that cannot be done remotely (use teleworking where possible).
- Reducing exposure of employees by using virtual communication where possible.
- Limiting contact between operations teams at shift changeover times.
- Physically separating the operations team by using a backup operations control centre (if existent) as well as the main operations centre. This can avoid a whole team being out of operation because one person has become unwell.
- Operations shift teams should not be mixed; shift rotations should retain the same team members so that one sick person can only affect one team. Solo working, rather than working in pairs should also be considered. The congregation of staff in break rooms should also be reduced.
- Keeping physical distance between individuals within teams.
- Reducing hard-copy document sharing.
- Every manager or team leader should have a replacement who does not meet face to face with him/her.
- Airports should have a pool of individuals who are at home but on call in case of need.
- Increased cleaning of work areas and equipment.
- Any member of staff showing signs of a cold or flu must stay home until medically evaluated.
- Permitting staff to use car parking closer to terminals and the work location—avoiding the need for staff to be in close proximity on buses.

## 4.11 Ground Handling Operations

4.11.1 Airport operators should work collaboratively with Ground Handling Service Providers to ensure the safety of operations on the airport, in particular during periods of low activity and ramp-up. Close coordination between the airport and ground handlers is required to ensure a common situational awareness is established for all, especially as related to the operational planning of activities and return of staff to operations.

4.11.2 See previous sections of this chapter for further guidance and refer to International Air Transport Association (IATA) guidance available at <https://www.iata.org/en/programs/ops-infra/ground-operations/>.

## 5 Airport Operations Control Centre (AOCC)

Revised Guidance as of March 2021

### 5.1 Coordination

5.1.1 The business recovery phase after the unprecedented shut-down of global aviation in the course of the COVID-19 pandemic crisis will pose a considerable operational challenge for airports worldwide and the main burden for ensuring a controlled and coordinated ramp-up will be placed on the centralized operational unit, or Airport Operations Control Centre (AOCC) when applicable, as the centralized coordination cell of the stakeholder community of an airport.



5.1.2 If an airport does not have an AOCC in place, the creation of a centralized ad-hoc coordinating unit for managing recovery is recommended, with clearly defined communication channels and responsibilities as outlined below.

5.1.3 Below are some recommendations to ensure the business continuity of the AOCC during a crisis.

### 5.2 Aircraft Operators, AOCC and other Stakeholders' Communication

5.2.1 Additional coordination and communication effort will be required, as for an extended period of time, flight schedules will not be as stable and predictable as usual, and many travel restrictions will still continue to apply in many countries that require a lot of special handling procedures and passenger segregation processes to be managed.

5.2.2 At the same time, airport capacity may only be partially available as apron areas, taxiways and in some cases, runways may still be blocked for parking of stored aircraft of grounded fleets. Also, part of the terminal building might be temporarily closed or decommissioned in order to recover revenue losses through reduced manpower effort for maintenance, cleaning, security and customer services as well as in order to save energy consumption.

5.2.3 An adequate briefing and use of conference platforms between aircraft operators, other stakeholders and the AOCC ensuring that participating airline staff can make key management decisions, should be established on a regular basis.

5.2.4 Particular emphasis should be placed on maintaining an even closer than usual coordination with the Maintenance Operational Control Centre and the Operations Control Centre of home-based operators, which might involve daily dedicated telephone conferences to align on the aircraft return to service plan.

5.2.5 NOTAMs in effect for temporary closure of taxiways or even runways need to be cancelled or adjusted and ATC needs to be advised well in advance to ensure that temporarily closed runways are back into operation when the demand is there. It is also required that all critical stakeholders, service providers and government authorities are advised in advance on ramp-up schedules and any plans of the airport operator to return temporarily closed facilities into service. This will give adequate advance notice to adjust staffing levels accordingly.

## 5.3 Coordination and communication

5.3.1 The AOCC has a crucial role in consolidating the information available from all relevant sources and disseminating it back out to the airport community. In the context of this particular situation, stakeholders that are part of a structured AOCC or an ad-hoc coordination cell should take on the following roles and responsibilities.

### **AOCC**

Communicate all new/updated processes that could impact any stakeholder in a timely manner. This should consider decisions from higher authorities (government, operators, executive level, etc.).

### **Aircraft operators**

As health regulations for cleaning aircraft will vary from country to country, it is the aircraft operator's responsibility to notify the AOCC of these requirements in a timely manner so that the AOCC can assess if those requirements can be provided or not. Based on the outcome, the AOCC will coordinate gate assignment and other common use terminal equipment. Aircraft operators should also advise on special cleaning or disinfection measures applicable on their aircraft that may affect turnaround times or Precision Time Schedule (PTS).

### **Ground handlers**

Should notify the AOCC of any capacity limitations (staff or equipment) to handle aircraft turnaround.

### **ATC**

Should notify the AOCC of any pilot-reported issues related to COVID-19 of all incoming/outgoing flights.

### **Customs and Immigration**

Should advise on any manpower shortages or any health-related documentation procedures during immigration and customs procedures.

### **Law Enforcement/Security Team**

Should advise on any specific requirements or procedure changes.

### **Local Health Authority/Port Health Authority**

Should advise on local/national health restrictions or procedures applicable for travellers from all origins or for travellers arriving from certain origins as well as commonly applicable measures imposed on airports or other public buildings that need to be followed.

## 5.4 Managing the impact of health requirements

5.4.1 In the recovery phase, the traffic patterns and characteristics have changed dramatically over the seasonal schedule and short notice variations need to be expected on a daily basis. This has resulted in more manual updates and, therefore, a greater risk of errors in flight data management and resource allocation.

5.4.2 The increasing number of restrictions implemented by each state and the special procedures to be applied for flights to and from these destinations as well as local restrictions and rules applicable for particular destinations can significantly constrain the flexibility and capacity in resource assignment.

#### 5.4.3

The following scenarios should be considered by the AOCC or crisis management cell:

- Unusual traffic patterns as many ad hoc flights complement regular services or will in an unusual way even feed scheduled services.
- Private, government aircraft, executive jets, feeding long haul scheduled flights, which might require that general aviation flights need to be accommodated on the main commercial airport instead of a nearby general aviation reliever airport to facilitate transfer in times when multiple immigration restrictions still apply.
- At some hub airports, those charter flights will connect with scheduled services. Often special arrangements need to be made in order to facilitate the transfer from charter to scheduled services, which entails that certain operators or types of traffic might need to be allocated to other terminals than usual or in some instances require even tail-to-tail transport of passengers to be arranged.
- Special approvals from State authorities need to be obtained in due time.
- Special pre-departure measures.
- Special arrival measures if an incoming flight is suspected not compliant with your government measures.
- Identify where new technology/equipment (such as thermal screening, testing, PPE, etc. required by other States) might be supplied or where certain arrangements for storage and dispensation of PPE can be made or where other special procedures can be performed.
- The instability of the schedule is expected to persist still for a number of months as travel restrictions in effect in many countries will only gradually be relaxed and the business life in many countries will only gradually recover which makes it very difficult for aircraft operators to predict demand.
- Airline bankruptcy and/or or fleet size and network reductions.
- Very instable schedules and a many of ad hoc changes such as one-off charters, cancellations, service reinstatements, aircraft type and rotation changes, and even schedule changes.
- Special hygiene and disinfection procedures will require extended ground times of aircraft that are arriving from high-risk countries which might affect schedules or result in aircraft changes.
- Aircraft of home-based carriers that are stored on other airports are repositioned to their base airport where they undergo extensive maintenance prior to re-entry into service and need to be accommodated along operational and stored aircraft.
- Many towing movements need to be coordinated by AOCC as required to unlock return into service operational aircraft that are locked—in by aircraft that are still in long term storage and in order to facilitate various maintenance activities including engine runs as required before an aircraft may return to service.
- Ensure that resource allocation rules in Resource Management IT systems are being reinstated after they have been temporarily overridden or deactivated to accommodate stored aircraft in denser non-standard parking configurations.
- Adjacency restrictions, e.g., wing-tip clearances of temporary contingency parking stands with regular parking stands, need to be observed.
- Additional stand and gate allocation rules might need to be generated in the database of the Resource Management tool in order to reflect new public health related requirements as physical distancing or segregation of passengers or other measures as thermal scanning. Examples are certain destinations or origins only to be accommodated at specifically equipped gates or certain aircraft to be exempted from certain gates as the hold room capacity may not be adequate in accordance with new physical distancing standards, etc.

5.4.4 The AOCC also has a pivotal role to ensure that temporarily closed down terminal and apron capacity is reinstated, in line with the resumption of demand, and hereby ensuring that adequate capacity is supplied to accommodate demand while maintaining newly imposed physical distancing demands at bottlenecks.

5.4.5 A very critical phase for the AOCC will be when aircraft operators are gradually reinstating stored aircraft back into service, as for a prolonged time the ratio between operational and storage parking stands needs to be carefully balanced and conflicts between operational and stored aircraft should be avoided in order to ensure adequate supply of capacity and for the safety standards not to be compromised.

## 5.5 Managing Stranded Connecting Passengers

5.5.1 As countries start to relax travel restrictions, transfer and transit operations will be reactivated in most airports. However, due to volatile or incorrect information, transfer passengers may be stranded in the airport if their connecting flight is cancelled or their onward travel is not permitted by the destination country.

5.5.2 Additional constraints such as immigration procedures might not allow for certain passengers to enter the country, thereby limiting access to a hotel outside of the terminal building. The AOCC should advise concerned parties (Terminal Operations, Airport Duty Manager, Immigration, Ground Handling Service Provider, Airline, Welfare Services, etc.) on the presence of stranded passengers in order for the airport, in collaboration with the aircraft operator, to either facilitate exceptional restrictions from immigration rules or to ensure that passengers will be appropriately treated in the transit area. For example, certain locations equipped with foldable cots or in areas where food can be supplied as even F&B outlets at the airport may still be closed or only be in limited operation.

5.5.3 Upon notification from the aircraft operator of such cases, the AOCC will coordinate the handling and respond according to local health regulations and appropriate operation procedures. During this pandemic situation, the health condition of the transfer passenger will be closely monitored on top of other established procedures to handle stranded transfer passenger.

## 5.6 Inside the AOCC

### 5.6.1 **Reduce staff contact**

The AOCC is usually a compact working place with staff working closely together. To reduce the risk of infection, measures to reduce the number of staff and gathering in the centre could be considered, such as:

- when available, activate backup centre to spread out the workforce
- reassign tasks to other office locations if possible
- stagger shift handover time of different teams or sections
- reduce or scale down briefings and meetings, and
- workplace physical distancing with the use of plastic dividers, more spaced-out workstations, etc.

### 5.6.2 **Remote working for the AOCC**

Depending on regulations and restrictions of the AOCC as well as the possibility for IT systems to be operated remotely, remote working arrangements for some duties or tasks could be considered, such as:



- telephone or hotline call receiving centre stand
- gate or arrival baggage reclaim belt assignment planning for next day, and
- recording function, administrative tasks and compilation of statistics and reports.

### 5.6.3 **PPE for AOCC personnel**

5.6.3.1 While the AOCC may be in a different part of the airport, the access to the AOCC is restricted to authorized staff. Therefore, the chance of contact with the general public is minimal when compared with other airport staff. Nevertheless, the provision of suitable PPE for AOCC staff is still recommended. This could include requesting all AOCC staff to wear a face mask at work. Provision of disinfection gels or sanitizers in AOCC should also be considered.

5.6.3.2 For AOCC staff that may be required to carry out tasks in the terminal building or other areas where contact with passengers or the general public is expected, refer to your country's ministry of health directives. Additional PPE, such as gloves, goggles, face shield, caps and gowns, or shoe covers, will be required based on local health recommendations.

### 5.6.4 **Additional restriction measures to access the AOCC**

On top of the normal restrictions of access to the AOCC, additional measures could be imposed. These measures could include:

- under certain conditions (for example staff with fever/high body temperature, a direct family member or roommate in shared accommodation testing positive to the virus, etc.) access to the AOCC should be denied
- non-critical maintenance, refurbishment or renovation work in the AOCC should be postponed
- visits, trainings and presentations in the AOCC should be suspended
- office equipment, pantry supply, PPE delivery, mail delivery and consumables supply should be centralized to reduce the frequency and access by logistics personnel, and
- airport staff without PPE should not enter the AOCC.

### 5.6.5 **Shift patterns**

5.6.5.1 To reduce the safety risk for the staff working at the AOCC, some best practices should be implemented. Alternating teams should be formed and contact with members of the opposite team should be limited to avoid possible contamination.

5.6.5.2 A reserve team could also be considered, to be activated if one of the alternating teams must quarantine. A reserve team would be assigned at a safe place (working from home, for example). This could also support the team on duty by performing some support functions, administrative work, or undergoing training from home. The reserve team should be kept informed on all activities and operational developments of the AOCC to ensure they are updated and ready to take-over when necessary.

### 5.6.6 **Common use equipment in the AOCC (mouse, keyboard, etc.)**

5.6.6.1 There is much common use equipment and facilities in the AOCC such as computer keyboards, mouse, telephone set, hand-held TMR/VHF equipment, CCTV control board, mobile phone, keys, working console and seating, etc. The cleanliness and hygiene condition of such equipment is essential to the health of all AOCC staff. An increase in the cleaning frequency and disinfection of this equipment and facilities should be arranged. After each changeover of shift, common use equipment should be thoroughly disinfected with the appropriate products.

5.6.6.2 Some airports are using a second set of common equipment (such as keyboard, mouse, etc.) to speed up the changeover of shift.

#### 5.6.7 **AOCC response for a confirmed team member with COVID-19**

5.6.7.1 The AOCC is an enclosed working place with long working hours and close working proximity. Depending on local health regulation, when one of the AOCC team members has tested positive, quarantine measures may need to be applied to the whole team. To fill the deployment gap, a backup plan or backup team will be needed to replace the team being put under quarantine. Contact tracing for other staff the team member has been in contact with may also be required.

5.6.7.2 There may also be local health regulations to thoroughly clean and disinfect the centre after a staff member testing positive. In that case, the backup centre will need to be activated to take over the operation and function of the closed AOCC. Advance health checks and readiness of the backup centre should be in place.

#### 5.6.8 **AOCC response to a confirmed pax with COVID-19**

5.6.8.1 The handling of a passenger (departure, arrival, transfer/transit) confirmed with COVID-19 will follow the local health regulations. The AOCC should have established and maintained a close liaison with the local Health Department as the centre to receive such information. The AOCC will then disseminate the information and details to the relevant airport organizations and staff to implement their own response and precautionary measures.

5.6.8.2 These measures could include:

- inform airport staff that may have had close contact with the passenger, such as aircraft operators, handling agents, passenger services, security, immigration, customs, border control, police, etc.
- clean and disinfect public places where this passenger had contact, such as toilets, seating areas, boarding gates, transfer points, security points, telephone kiosks, etc.
- inform owners and operators of places where this passenger had contact, such as restaurant or food courts, airline lounges, duty free or retail shops, etc., and
- for some airports, there may be relevant sections in their Emergency Planning Manual or Operations Manual to deal with such situation. The AOCC will then coordinate and implement the procedures accordingly.

### 5.7 **Emergency Operations Centre (EOC)**

5.7.1 It is recommended that the EOC remains functional during the pandemic crisis and during the immediate restart phase. Although the current crisis might be the top priority of all airport stakeholders, the risks of other disastrous events remain. Due to drastic drops in volume, the likelihood of such events has been reduced but the requirement or expectation to perform during such events remains.

5.7.2 These other emergency situations (such as aircraft accidents or acts of terrorism) require a solid command, control and communication structure that can cope with a fast-paced, evolving situation. In such instances, the EOC and Mobile Command Post remain the best tools to mitigate the impacts.

5.7.3 If the EOC will be activated (although maybe in an alternate location), this should be communicated to the stakeholders. The special protective measures related to the pandemic crisis should also be applied to the EOC. Consideration to a remote EOC, using web-based solutions, should also be studied.

## 5.8 Secondary location of the AOCC

5.8.1 Some airports, as part of their pre-COVID-19 business continuity plan, may already have established a secondary location in the event that the primary AOCC location must be evacuated. Because of the criticality of the AOCC continuous operation, consideration for a backup/secondary AOCC is paramount.

5.8.2 In the event of the AOCC primary location must be evacuated, a standby team/plan should be triggered in order to activate the AOCC backup location. All health and safety measures in place at the AOCC should also be applied to the backup location (i.e., PPE, cleaning/disinfectant products, etc.).

5.8.3 In the case when a backup is available, consideration should be given to:

- Splitting the AOCC team's and functions between the primary and backup location. Measures to prevent cross-contamination between the primary and backup location should be in place.
- Ensuring that the backup AOCC should be active prior evacuating the primary AOCC.
- Establishing a second backup location in the event that the first backup option is not accessible or available.

5.8.4 Any backup location should be equipped to sustain at least 72 hours of operations.

## 5.9 Actions

- Consider a secondary location of the AOCC.
- Provide adequate, frequent communications with aircraft operators, ground handlers, and all stakeholders to disseminate important information. Work with aircraft operators to have a plan in place for transiting or transferring passengers who could become stuck due to onward travel restrictions. This plan should focus on passengers who may not be allowed to leave the terminal and should include access to beds or cots, and food and beverage.
- Reduce staff contact within the AOCC through divided workstations, a back-up centre, and the reallocation of tasks to a different location.
- Provide basic PPE (face mask, hand sanitizer) for all AOCC staff.
- Disinfect all common use equipment and working stations within the AOCC or provide a secondary set of equipment to ensure a faster changeover.
- Consider creating a Reserve Team for the AOCC, working in a location separate from the AOCC. This Reserve Team could be activated should one of the primary teams become quarantined.

## 6 Employees and Human Resources

### Revised Guidance as of March 2021

The COVID-19 pandemic has been primarily a health and human issue, but it has far-reaching financial and economic ramifications that affect the health (physical and mental) and well-being of employees and their families.

As we airports restart and resume a “new normal” of operations, they will need to maintain the highest health and safety standards. Organizations should develop a proper plan of how to manage the post-closure (reduced operations) issues with all concerned parties such as trade unions, individual airport departments, and contractors. Additionally, airports must show consideration for their employees, building trust, improving morale and demonstrating confidence.



### 6.1 Employee Experience

6.1.1 Since the customer experience is mainly about encounters between humans, they all need to be in the best state of mind to get the most of these interactions. Unfortunately, passengers and staff will likely be worried about their own health and that of their families. The fear factor and physical distancing are causing an increase in stress and anxiety. During these challenging times, caring for customers starts with thinking first about employees and stakeholders. A big risk for airports would be to focus on recovery and customer experience strategies while taking employees for granted.

6.1.2 As this self-awareness around keeping healthy is increasing and in order to act to satisfy the customer, airport employees need to have the right tools and guidance to perform their job safely during the crisis. Employers (airports or stakeholders) must provide new tools, remote training, and support to enable employees to deliver superior customer experience in a new environment.

### 6.2 Employee Health and Wellbeing

6.2.1 Organizations should always be concerned with employee health and wellbeing, but it is especially important in times like these. Due to the current situation, in addition to being stressed over their own health and the health of their families, many employees are outside of their comfort zone and have lost the possibility of meeting socially with friends and family, in many cases, which could have an impact on mental health and physical wellbeing. When available through an airport employee assistance program, it is important to offer psychological support and counselling.

6.2.2 For staff temporarily sent home or working remotely, a prerequisite to a smooth recovery is that the airport provides frequent news and updates, and the direct manager has regular communications with their employees in order to keep them engaged with the airport. Regular remote meetings and discussions are also a great opportunity to ask them how they feel, if they are isolated, or feel anxious and check if they are well installed and safe at home.

6.2.3 Given the prolonged nature of the event and the uncertainty that many employees are confronted with around staff reductions or long-term furlough programmes consideration should be given to providing psychological support through means such as telephone helplines or staff peer briefings and support groups. It is important that personnel feel adequately psychologically accompanied during this phase.

## 6.3 Employee Experience Pre-recovery

6.3.1 An airport must provide training and information about any new processes introduced as a result of COVID-19. A refresher about customer experience might be very useful. It is also an effective way to communicate airport customer experience and recovery strategies.

6.3.2 Listening to the voice of employees during this time is paramount to maintaining employee engagement and buy-in. Means such as virtual suggestion boxes, surveys and remote work groups are ways to engage employees and maintain or increase their commitment, making them feel they are part of the solution to recovery. Virtual task forces dedicated to engage employees with the changing expectations for customer experience are recommended.

6.3.3 Communication will be key to keep airport and stakeholder employees engaged. Transparency in the messages to gain trust and enhance relationships is important. The communication must also start to answer employees' basic needs, such as security and health.

6.3.4 Airports and stakeholders' leaders must pay particular attention to employees that are vulnerable (+65 years old). Interaction with older generations may be severely restricted or perceived as high risk.

## 6.4 Operational staff

6.4.1 Many staff on airports have operational roles with shift patterns tied to levels of production and activities. With the significant reduction in activities, many staff have been temporarily furloughed or are working reduced shifts. Some have not been engaged in operations for weeks or possibly months. In addition, the new health security requirements can have an impact on the performance of their individual duties (disinfection procedures, distancing, etc.) as well as the standard operating procedures staff are accustomed to apply (security protocols, boarding, etc.).

6.4.2 Particular attention needs to be given to accompanying the return to operations for staff in these types of functions, in particular as regards training and competency checks so as to be sure that they can perform their duties according to established or new standards and criteria. See section 4.4 for further information related to the return to operation of staff.

6.4.3 In some cases, in order to maintain competency or a specific license, staff have to undergo regular training and checks. Individuals who are absent for prolonged periods of time may not be able to complete the adequate training and checks requirements therefore losing their licenses or operating permissions. Particular care should be taken to ensuring that all staff returning to operations have undergone adequate training and are competent to perform their duties.

6.4.4 For any staff who has been absent for a prolonged period of time, the return to operations may be daunting in particular for those directly confronted with the traveling public. Measures to accompany this return to operations should be considered, such as pre-shift staff briefings and post-shift staff de-briefings, rostering shorter shifts or pairing less experienced employees with more experienced ones. The presence of management teams will also be useful

to accompany the return to operations. Did you know ACI provides several training programmes that can assist with the re-skilling staff? (<https://aci.aero/global-training/>)

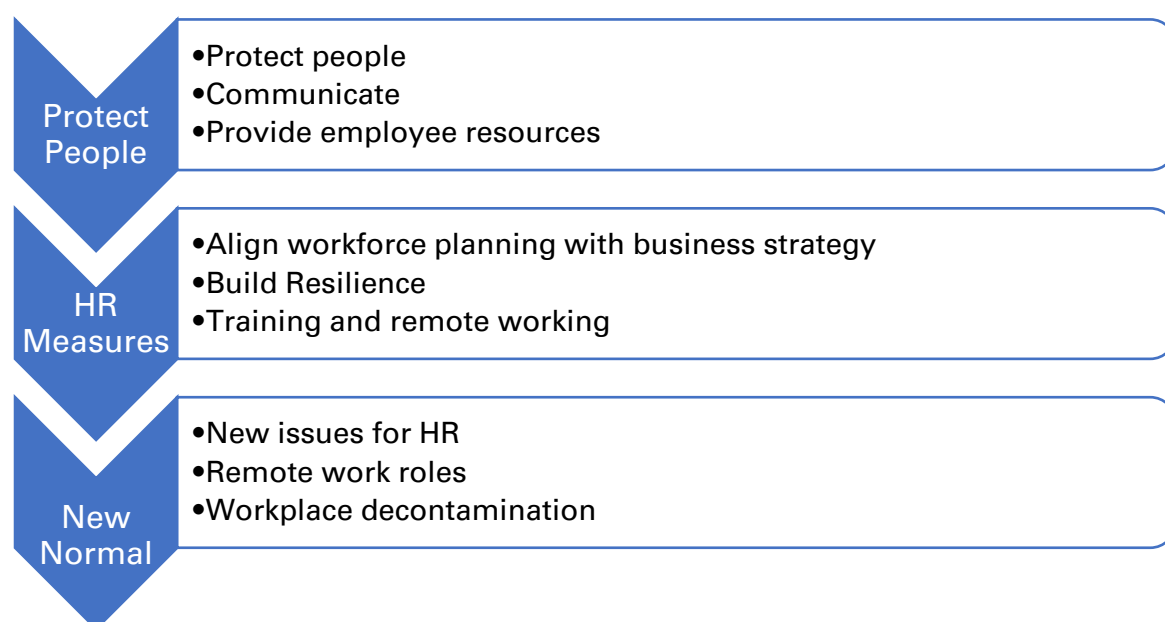
## 6.5 Gathering Feedback

6.5.1 It is important that airports listen to employees' opinion during the recovery phase. Frontline employees are a company's eyes and ears on the ground. Soliciting and collecting employee feedback about how customers are feeling and how daily interactions are changing is a good way to help airports listen to the voice of employees and help them to innovate.

6.5.2 If not done during the pre-recovery phase, employees should be asked what they need to do their work and monitor their level of engagement. Getting the voice of employees will help measuring the employee engagement and experience and plan various initiatives to improve.

## 6.6 Measures and Tools

Below are some examples of measures and tools to ensure an engaged and healthy workforce.<sup>1</sup>



### 6.6.1 Protect People

- Help employees stay safe and healthy, whether at work or at home.
- Champion wellness, including mental health. Point employees toward resources that can help them navigate through the crisis, including the benefits airports may offer, such as counselling or stress management.
- Review cleaning and sanitation protocols with the administration team and adjust workspaces to comply with any physical distancing guidelines.

<sup>1</sup> These recommendations and practices are based on a document developed by the ACI Asia-Pacific Human Resources Committee with inputs from the ACI North America, ACI Africa, ACI Latin America HR Committees and ACI Europe Leadership Forum for consideration of the airport HR community.

- Provide the protective equipment employees may need, such as gloves and masks, and consider installing new protective measures where applicable, such as plexiglass shields between customer-facing employees and customers.

#### 6.6.2 **Communicate effectively in uncertainty**

- Lead with responsive, empathetic communications and policies.
- Engage employees with real-time, personal, consistent communications about health and safety, policy updates and guidance from leadership.
- Be transparent about the financial health of the airport and any plans to take workforce actions, especially the possibility of furloughs or layoffs.
- Centralize communication channels: Create an internal portal or “hub” with policies, news updates and FAQs, so employees have a resource to get answers quickly.

#### 6.6.3 **Maintain continuity of work**

- Provide employees with resources and support they need to be productive.
- Continue to evaluate which employees in critical roles should remain on site versus those that can work remotely. These policies may change over time.
- Support secure and efficient remote working capabilities that may include developing and implementing new technologies or workflows to help employees maintain productivity, as well as providing coaching on how to lead a remote team.
- Accelerate new ways of working through digital upskilling, e.g., online or virtual classroom.
- Give adequate considerations for recurrent training/ new health requirements training.

#### 6.6.4 **Specific HR measures to help resume full airport operations**

##### **Preparing for recovery**

- Align workforce planning with business strategy to ramp up for recovery.
- Draft the “new normal” re-entry guidelines to help address safety issues when on-site work resumes.
- Phase into full staff in the office/terminal while remaining fiscally responsible.
- Manage workforce data to help keep track of employees’ locations, any mobility or technology issues they may be experiencing, their daily work status and other relevant issues.
- Refresh the workforce strategy, clearly defining critical capabilities, locations and resources mix.
- Closely monitor statistics in the area to ensure that there are no significant resurgences of cases. If this occurs, we should be ready to redeploy employees to work from home.
- Review and renew airport business continuity plans (BCP). If there are deficiencies, identify root causes, whether it is timeliness of action, lack of infrastructure, labour shortages, or external environment issues.
- Consider putting new internal guidelines in place based on lessons learned, as well as solid contingency plans to build resilience and better respond to future crises.

### **Health practices**

- Continue to reinforce the physical distancing in the office as well as during meetings.
- Post signs in bathrooms/kitchen to indicate that no more than two people should occupy the space at any one time.
- Continue to support TEAMS or other platforms meetings to provide space for physical distancing in meeting rooms.
- Supervisors/managers must reinforce the physical distancing and employees should feel comfortable to inform others to stay six feet apart.
- Parking (if applicable)—if temporarily provided near the terminal/ office—continue to manage expectations about changes that will come when employees move back to the surface lot and buses or light rail.
- Create a system to manage visitors to the office and reinforce physical distancing protocols—in the beginning visitors should be strictly limited.
- For the time being, you may want to consider shutting off the ice machine, coffee makers, etc. or providing sanitary wipes to wipe down those “high touch” surfaces.
- Equipment that is shared or being touched by more than one employee should be disinfected after each employee (IT staff should be aware of this as they are assisting employees on a regular basis, also the front desk and printer/copy machines).

### **Ramp up training and investment in remote working**

- Train to employees on how to successfully work remotely.
- Train managers on how to manage a remote workforce.
- Find new ways to create engaging experiences which are experiential and fun, incorporating more gamification, virtual reality, and augmented reality for corporate learning.
- During initial business recovery phases, encourage the use of online and virtual classroom training.

## **6.7 Preparing the Airport Workforce for the New Normal**

6.7.1 As the airport prepares to deal with the new normal, these are some pertinent questions that could provide insight to readiness:

- Can the airport operate with 25% or greater absenteeism?
- If illness causes high absenteeism, are employees cross-trained and able to perform multiple duties?
- Can employees work remotely?
- What infrastructure support is needed to support a shift to an “at home” workforce?
- What assurances to provide to employees so they feel safe at work?
- What procedures are in place to decontaminate working environment and its heating, ventilation, air-conditioning systems, electronic equipment and other areas?
- Are there escalation procedures to get additional resources?
- Is there a trained and representative crisis management team that includes on-call employees, and do those team members?



## 7 Health

The responsibility for management of the risk of communicable diseases at airports rests primarily with the local, regional and national public health authorities. However, all stakeholders, including airport operators and aircraft operators, need to collaborate and play a role for the safety of passengers and staff members.

Airports should work together with the local, regional and national public health authorities to support measures where required. In order to reduce the spread of communicable diseases and viruses at airports during operations, airports can consider the initiatives below.



### 7.1 Cleaning

Cleaning and disinfection of terminal infrastructure and all equipment should be done on a regular basis, and its frequency should be increased as required due to traffic and use.

- Take into consideration enhanced hygiene, cleaning and disinfecting requirements and adjusting the number of staff allocated for cleaning based on flights and passenger volume.
- Ensuring that sufficient supplies of recommended cleaning and disinfecting products are available.
- Update and adapt cleaning and disinfecting processes, schedules and products to be used and ensure all cleaning staff are aware of such new guidance. This information needs to ensure staff are utilising products effectively .
- Ensure that areas that are most likely to be contaminated are cleaned frequently, such as:
  - carpets at the entrance of the terminal
  - airport information desks, passengers with reduced mobility (PRM) desks, check-in areas, boarding areas, etc.
  - escalators and lifts
  - washrooms and baby changing areas
  - luggage trolleys and collection points: cleaned with dispensable wet wipes or sanitizers. Ensuring that disposal bins are made available to throw away wipes
  - seating areas prior to security screening and in boarding areas
  - parking shuttle buses and airside buses, and
  - stair handrails and lift push buttons.
- Clean down and disinfect more frequently all passenger process touch points, such as:
  - check-in and self-service bag drop kiosks
  - security lanes
  - e-Gates
  - immigration kiosks, and
  - vending machines and water fountains.

### 7.2 Facilities

**7.2.1 During the initial restart phase,** the following measures should be considered to limit crowds and therefore reduce risks of transmission:

- Increase use of air conditioning to keep air clean and increase ventilation.
- Segregate high-risk flight arrivals into separate or closed-off areas of the airport.
- Implement shoe sole disinfection carpet or alternatives, where feasible.
- Implement posters and signage about health information in prominent locations throughout the terminal.
- Temporarily close or enhance monitoring of certain areas, based on phases of mitigation measures, such as:
  - self-service buffet food
  - café seating, or multi-purpose seating
  - smoking areas, and
  - children's play areas.
- Prioritise and adjust scheduling of all maintenance and repair work in public areas, possibly postpone non-essential work.
- Maximize usage of available floor surfaces to facilitate deployment of physical distancing measures while maintaining operational efficiency.

### 7.2.2 **Airport Terminal Access**

- According to each airport specificities and the national legislation in place, airport terminal access may be restricted to workers, travellers and accompanying persons in situations such as for passengers with disabilities, reduced mobility or unaccompanied minors in an initial phase, as long as it does not create crowds and queues, which would then enhance risks of transmission as well as create a potential security vulnerability.

### 7.2.3 **Facilities for Passengers**

- Ensure multiple hand sanitizer stations are available throughout the airport with adequate signage for passengers, including digital/mobile wayfinding, if available.
- Prior to passengers or staff approaching security screening points or other processing points such as kiosks and boarding gates, hand sanitizers and disinfection products should be provided.
- Install touch-free equipment in toilet facilities, such as:
  - automatic toilet flushing system
  - taps and soap/hand sanitiser dispensers
  - automated hand towel dispensers, and
  - hand dryers.
- Airports and aircraft operators should encourage passengers to use self-service contact-free digital options that are available to them, and States should encourage such regulatory changes that may be required to make them available, such as:
  - Web and off-site check-in
  - self-tagging and service bag-drops
  - mobile 2D boarding pass
  - self-scanning, and
  - Automated Border Control (ABC).

## 7.3 **Physical Distancing**

7.3.1 Physical distancing may be an important component **during the initial restart phase** of the industry and while passenger volumes remain limited. As the industry moves to a recovery phase with increasing number of passengers, physical distancing measures will need to be re-evaluated based on medical criteria and local guidance from State authorities and should be

consistent with other local modes of transport, in particular, urban public transport used for access to/from airports.

#### Define Distancing Requirements

- Physical distancing should target reaching at least one (1) meter between all individuals, as per World Health Organization (WHO) guidance and in line with directions given by local authorities.
- It is recommended that passengers should wear masks where physical distancing measures cannot be fully observed at all times.
- Distancing may be required at locations where queues build, such as at check in, security screening lanes, border control, immigration, escalators and retail outlets.
- Airports may provide signage, temporary floor markings and announcements via PA system to encourage physical distancing measures in place. The airport can support communication of key prevention messages from health authorities through audio messages and signs at key touchpoints of the passenger journey.

#### Queuing

- Airports may choose to open/close certain desks, kiosks or security lanes to ensure space between passengers. This should be closely monitored to ensure that sufficient facilities are opened to prevent queues arising.
- Optimal spacing in queues can be achieved by increasing retractable stanchions and barriers spacing, and by providing clear positions in the queue to maintain appropriate distancing.
- Set up queue areas to allow for the safe distancing measures to be enforced.
- Increase signage on the floor to indicate the proper distance and provide passengers a visual representation of where they should stand.
- An orderly boarding process will be necessary to ensure limit direct physical contact between passengers, especially once load factors start increasing. Close cooperation between the aircraft operator, airport and government is vital. Airports will need to assist in redesigning gate areas, and governments will need to adapt any applicable local rules and regulations. The increased use of automation, such as self-scanning and biometrics, should be facilitated.
- Use retractable stanchions and floor markings to encourage physical distancing at the baggage carousel as a temporary measure.
- Maximize use of available arrival baggage carousels in order to limit the gathering of passengers within limited areas.

#### Staff Interactions

- For staff, ensure that guidelines can be met, including at all interaction points throughout the terminal:
  - This may involve providing enough distance between co-workers as well as between the passenger and staff using a physical barrier such as retractable stanchions or protective transparent screens.
  - Based on the risk of exposure (e.g., type of activity) and the transmission dynamics (e.g., close contact or droplet spread), employees may be equipped with PPE, which could include gloves, medical masks, goggles or a face shield, and aprons.
  - Hand sanitisers should be made easily accessible, especially at passenger processing points.

- For staff and teams working shifts, conduct contact-free handovers, i.e., via telephone, videoconference, electronic logs or, at a minimum, through physical distancing.
- Providing adequate protection for staff members. Needs should be evaluated case by case, based on local government/State recommendations and health criteria. Such protection may include: PPE, health screening programme for staff, scheduling (targeting to keep group of staff in steady teams and shifts), easy hand sanitizer access, specific staff process prior and after completing a shift, and physical distancing plan for workstation.
- For staff training, maximise use of online training and virtual classrooms.

## 7.4 Measures to Implement Health Screening or Monitoring at Airports

7.4.1 Should health screening measures be necessary, they should be introduced as upstream as possible in the passenger process, while minimizing impact on operations. It is preferable for passengers to arrive at the airport “ready to fly”. Likewise, and for international travel, it is preferable for admissibility to be determined at the point of departure.

7.4.2 If measures for on-airport health screening are deployed—if mandated and backed by medical evidence—they should be delivered in a way that minimizes disruption of airport operations. Large scale testing on-airport is likely to result in the creation of crowds, queues and additional dwell time. This would be counterproductive in terms of physical distancing and create unnecessary concerns about the safety of the aviation system, unnecessary security risks, and possible safety hazards.

7.4.3 If health screening is required by local authorities, or is the preferred option of an airport, a variety of options are available. These are generally designed to prevent symptomatic passengers from travelling and, therefore, further spreading the virus to staff and other passengers. For example, when addressing higher risk scenarios and applying testing as part of a multilayer risk management strategy, countries may require passengers to be tested for COVID-19 prior to arrival to their country. Various testing implementation models have been trialed in airports around the world and readers are invited to refer to Section 12 COVID-19 Testing Facilities at Airports for additional details.

7.4.4 There is no perfect health screening solution and, if required, it is usually a combination of measures that tends to provide best results. This gives the opportunity to use a risk-based approach, using results from several processes to identify when additional secondary health checks are required and contribute in reassuring the traveling public.

7.4.5 Below are specific initiatives and examples of such measures that airports may decide—or be required—to temporarily implement with the support of other stakeholders.

### 7.4.6 **Passenger questioning**

7.4.6.1 As early as possible in the passenger journey, ideally through an e-Self Declaration process, passengers can be asked about their health in the 14 days prior to travel, including standard questions about symptoms. Such information should be provided by the passenger directly to the local State authority. Further questions about a passenger’s lifestyle in the last 14 days could be raised to determine whether the passenger should be referred for a secondary assessment by local health authorities and possibly denied boarding. Some governments are implementing Health Declaration solutions that can be set-up on a web portal. For those States that already have a platform to collect visa and electronic travel authorization information, these could be customized to accommodate the collection of such information.

7.4.6.2 During the online check-in process, questions surrounding health may also be implemented by the aircraft operators. If passengers answer against the expected outcomes, this could, for example, automatically deny the online check-in process and require further investigation by local health authorities.

#### 7.4.7 **Implementing a “Just-Health” culture**

7.4.7.1 Raising awareness to all staff (airport, handling agents, aircraft operators, etc.) on what to look for regarding health symptoms when observing passengers is also important. This will allow the staff member to identify possible cases of passengers not fit to fly or not well enough to travel. Staff should be encouraged to report their observations, including about other staff members if they appear to look unwell. A health culture can be a major asset in tackling the spread of the virus. Much like implementing a security culture, or a safety culture, a health culture is a proactive way in mitigating health issues.

7.4.7.2 Some examples of how an airport can implement a “Just Health” culture are:

- provide an open line of communication between all levels of staff at airports and aircraft operators, and
- raise awareness and training on physical signs to watch for in passengers and colleagues.

#### 7.4.8 **Entry – Exit thermal screening**

7.4.8.1 This has not been proven to be effective in delaying or mitigating a pandemic due to the low sensitivity of the systems used to detect mildly symptomatic infections and their inability to detect cases during the incubation period (false negatives).

7.4.8.2 These measures may however play a useful role in reassuring the travelling public and act as a deterrent for travel in case of suspicion of infection. For this reason, governments should apply a common approach on this matter to ensure consistency.

7.4.8.3 If required for such purposes, temperature screening should be implemented:

- under conditions which minimize impact on operations at the airport and the passenger experience—in particular as regards passenger throughput across key terminal processes
- by professional medical staff, and
- early in the passenger process.

7.4.8.4 Smart thermal cameras can be installed at airports or used by operators to scan the temperature of multiple passengers rapidly and unobtrusively. Thermal screening is a process of detecting radiation, where the amount of radiation generated increases temperature. Thermology allows to see variations in body temperatures. If a passenger or staff member activates a higher-than-normal body temperature, they can be referred to secondary health assessment or denied boarding after being given medical attention by local authorities. Airports should be aware that more investigation need to be done before implementing thermal measures, as high ambient temperatures may affect the body temperature, especially when applied outside in the sun.

#### 7.4.9 **Temperature screening**

On-site medical staff can have contactless thermometers available to monitor a passenger’s health on departing or arriving flights. This method may be considered as an alternative option to thermal screening, although it is not designed for mass screening and may

rapidly cause queueing and slowdown of the passenger process. This measure is therefore recommended to be implemented for passengers sent to secondary health assessments.

#### **7.4.10 Self-service screening**

There are trials underway for self-service technology that can detect a series of indicators such as passenger's temperature, heart rate and ask a series of questions from a distance of 1.5 m. These technologies can be deployed at airport passenger process touchpoints such as a check-in desk, self-check-in kiosk, self-bag drop, security checkpoint, self-boarding e-gate or immigration kiosk. This enables the self-service device to act as a screening station for potential symptoms. The self-service station can also be used without a passenger touching the screen, therefore reducing the virus transmission.

#### **7.4.11 Health Declaration / Health Passport**

Some governments are implementing a Health Declaration solution that can be integrated with the existing processes, such as national databases, electronic visa or travel authorization applications prior to departing flights. The same forms can also be included in mobile applications, thereby eliminating the need for expensive touch-based equipment such as kiosks. Touchless Health Declarations can also be integrated into immigration kiosks at arrival airports or through more traditional paper forms handed for passengers to fill in prior to arrival. However, paper transactions should be avoided when possible. The information that will need to be ascertained includes details about a passenger's health in the 14 days prior to travel, any symptoms shown, result of a COVID-19 test, and countries or areas they have visited. This may help officials evaluate each passenger and whether they will need to be referred to secondary assessment.

### **7.5 Health Screening Locations in Airports**

Health screening in airports may be required for both departing and arriving flights. This needs to be based on local State authority guidance. The financial cost of screening should also be borne by local State authorities. If required by local authorities, airports might consider creating certain triage areas for those who might show symptoms consistent with the virus. This should be done in a way that avoids creating any slowdown to the flow of passengers.

#### **7.5.1 Departures**

Pre-flight and off-airport passenger self-declaration information should be encouraged to reduce potential health impact to other passengers as well as on airport flow and throughput. Additional health screening measures, as described in the previous section, may also be deployed to enhance health screening capability, especially during the initial restart phase of our industry. The recommendation is to avoid health screening processes on every passenger. This would not be operationally viable to sustain through any significant business recovery in passenger and flights volume. The general "80-20" rule is recommended, where the major part of the passenger flow is maintained, and an enhanced health screening process may be deployed and only applied for those that have been identified as showing a higher health risk.

#### **7.5.2 Arrivals**

- Where declarations are required on arrival, governments should consider electronic options, e.g., mobile applications and QR codes, to minimize human-to-human contact.
- For customs formalities, where possible green/red lanes for self-declarations are recommended.

- Appropriate sanitary measures must be taken at secondary screening points to protect passengers and staff.
- It is suggested that governments should simplify border control formalities, by enabling contactless processes, e.g., relating to the reading of passport chips, facial recognition etc., setting up special lanes, and training their agents to detect signs of unwell passengers.
- Possible redesign of immigration halls needs to be coordinated between the airport, aircraft operators and the government.
- Some governments already conduct risk assessments of flights arriving from specific countries and will accordingly limit or prohibit aircraft operators from flying high-risk routes.
- For those targeted flights, arriving passengers could be questioned by officers (most likely immigration or health officers) or requested to fill out a questionnaire for evaluation (recommended to then use a digital tool). This process is most likely suited for a centralized immigration area, as all passengers arriving from international destinations would be subjected to immigration and customs checks. A separate facility or area for further secondary health assessments could be set up to maintain the main general flow of passengers. Temperature screening can be conducted prior to the immigration hall to capture the highest footfall of passenger traffic and make best use of resources. This would be part of the evaluation process to identify passengers required to be directed to secondary health assessments.
- For higher-risk flights from areas where there are more reported outbreaks, officers can be waiting at decentralized locations near the boarding bridges, to evaluate passengers as they disembark. This may be a more effective way of containing high-risk passengers prior to entering larger facilities in the airport.

## 7.6 Health During Airport Recovery Phase

7.6.1 The immediate measures presented in this guidance document are short-term options for the restart phase of the industry to help reduce the spread of the virus that is currently in a pandemic phase. As the world shifts to the recovery phase, health measures will need to change and ensure to adapt airport health-related processes to changing medical criteria. Increasing flight operations will require a multi-layered collaborative approach, a focus on a health culture, preventative measures, and risk-assessment approach, with the option for seamless health screening that can avoid potential direct impact on airport operations.

7.6.2 ACI World encourages wider adoption of health measures to reduce risk to passengers and staff, adapt such measures based on the related phase of health risk criteria and related passenger volumes, ensure health measures follow scientific evidence guidance, and deployed in ways which make operational and business sense.

## 7.7 Actions

Implement actions to reduce the spread of communicable viruses, such as:

- More frequent cleaning with the appropriate products and provision of hand sanitizer for passengers at strategic processing points for the short-term.
- Design and plan the use of terminals to incorporate adequate physical distancing measures during initial business recovery phases.
- Implement health screening measures, if required, as upstream as possible in the passenger process. If certain measures need to be introduced at the airport, they need to minimize the impact on operations and could include passenger questioning, cultivating a health culture amongst employees, thermal screening technology and others.

## 8 Security

Airports around the world have seen a substantial drop in passenger traffic. This has resulted in the reduction of operations such as security at airports, a reduction in staff, and disruption to ongoing training of personnel and certification of equipment. It is expected that once the pandemic phase of COVID-19 begins to subside, governments will begin relaxing restrictions on civil aviation and therefore airports will be open to traffic again.



The recovery phase centres on restoring normal operations, repopulating public and secure areas, and ensuring that staff members and other impacted individuals have confidence that they are safe.

Additionally, recovery provides opportunities to reflect on the event that has occurred and work in collaboration with senior leaders and those affected to improve services and implement new processes and procedures to identify a post COVID-19 operation.

This guidance is aimed towards security operations and various areas to focus on when upgrading operations from a reduced mode to recovery mode to fully operational mode.

### 8.1 Operational Continuity

8.1.1 At a reduced capacity, security operations have had minimal staff on hand to maintain the checkpoints and access control points during the pandemic. However, as restrictions to travellers begin to ease, the operation will need to have adequate resources to handle the return of increased volumes of passengers. The Airport Security Committee (ASC) is an operational committee, normally chaired by the airport operator, that holds frequent meetings with various airport tenants to discuss various matters including:

- Review of the prevailing threat to airport security.
- Coordination among the stakeholders of the implementation of airport security.
- Provision of a forum for the discussion of aviation security matters.
- Review and provision of advice on plans for new or modified facilities as well as new or modified operational processes.

8.1.2 The ASC should hold a special meeting with the stakeholders involved to discuss a comprehensive plan on the timelines the airport plans to implement with regards to operations.

8.1.3 The meeting should include the following representatives:

- appropriate authority for aviation security
- airport operator
- airport security manager
- airport security service providers
- manager of contracted security provider
- law enforcement authority
- emergency response units and/or first responders
- other government agencies
- aircraft operators



- airport tenants
- border control authorities such as customs and immigration
- general aviation agencies
- handling agents, and
- catering operators.

8.1.4 The topics of discussion that should be discussed could include the following areas:

- Security providers will require reliable estimates from the airport operator on the capacity that will be required and timings.
- Timeframes of return to operations. The return to operation will occur in stages and the duration of these stages should be mentioned.
- Processes to prepare for the anticipated busier season with a focus towards recruitment and extra training sessions, and potentially use remote training options.
- Planning of manpower required for the staged timeframes.
- Review of the contract between the airport authority and the contractor, as changes in the operation may influence contractual conditions during this time.
- In conjunction with possible review of contract, a review of the SLA's and KPI's that may require temporary changes to adjust in passenger throughputs.
- Additional training for security staff on new health measures and guidance when conducting their security duties.

## 8.2 Access Control Measures

8.2.1 As employees return to the airport to support the recovery efforts, steps should be in place to ensure that all employees will be able to access their respective workplaces on airport property.

8.2.2 Airport identity cards are the most common use of access control for airports. As a security measure, it is common that passes that are not being used would be de-activated and, in some cases, passes returned to the respective airport pass control office. The airport pass office will experience an influx of employees that were temporarily laid off during the pandemic and therefore available resources to handle such increased demand will be challenging.

8.2.3 Airports should work with the appropriate authority responsible for airport passes, to determine the volume of expired or suspended passes and agree a plan for reinstatement.

8.2.4 Measures might include:

- Identifying processes to ensure efficient operation such as scheduling of appointments and online interviewing.
- Work with airport operations teams to identify highest priority staff for return to work.
- Consider measures such as separate locations for temporary pass issuance offices with additional staff.
- If possible, work with the local regulator to consider extending the validity of the airport pass for the population by 1 year to reduce the need for immediate processing post-recovery.
- Any security awareness training and tests related to airport passes should be conducted online if possible.

8.2.5 This will have to apply for applicants who have new passes as well any renewals for passes. With new applicants, processes outside of the pass office control such as background checks and reference checks could cause additional delays. Background check priorities should be placed on those individuals who handle sensitive security information, perform sensitive security functions, and/or have access to security restricted areas (SRAs). The order in which background checks for new hires should occur should be based upon a needs' assessment conducted by the appropriate authority.

## 8.3 Training

8.3.1 Security training is required at several different levels, including recurrent basic training for all staff, additional training for those with access to SRAs or with security roles, and specialized training for security screeners.

### **Planning**

8.3.2 Training and certification need to be up to date according to specific job roles. Airports should review training records for current and returning staff and contractors to identify training that is missing or out of date due to the furlough of staff or suspension of training during the COVID-19 crisis. A plan should be created to ensure the rapid training (and recertification where required) of staff, focusing on the most critical resources. This should be aligned with the access control planning above.

### **Training options**

8.3.3 Since restrictions on physical distancing are anticipated to be in effect for an undetermined period, all training should be conducted online through virtual classroom or e-learning, as much as possible. To create such programmes, content developers may require up to six months, and therefore need to be considered when looking at providing e-learning platforms. In some cases, distance learning may not be permitted due to regulations in place. Security providers should coordinate with their respective airport authorities and CAAs to allow for exemptions to regulations with regard to training and re-training security officers.

8.3.4 It is important that security trainers evaluate current courses that are available to security staff and consider the following:

- Identify which classroom training could be developed for online delivery and determine how to recreate interactions and questions that will engage students.
- Ensure content is focused on essential information for skill and knowledge enhancement.

8.3.5 Online learning is best utilized to ensure specific safety, security, operational, or financial content is provided to enhance skills of workers. Independent online can be effective in assessing knowledge and information recollection versus traditional classroom and workshop training.

8.3.6 Airport operators and security screening providers will need to engage closely with their appropriate authority for security. It is recommended that a dialogue is initiated with the respective authority in order to redesign common certification and training processes for security agents, in particular in relation to x-ray operations, allowing the implementation of effective and adequate distance-learning training and initial/recurrent certification measures. Such processes, through the implementation of specialized security training systems, allows for effective supervision and control by CAAs.

8.3.7 Also, a minimum extension period for certification and recertification processes of x-ray operators should be discussed. Such examples of this training could include blending online training with web-enabled video person-to-person sessions for complex, dynamic topics that require conversational answers not suited for online skills training content.

## 8.4 Procedural Changes

8.4.1 During the restart and recovery phases, procedural changes may be required to maintain health protocols, such as physical distancing, reduce manual pat-downs and face-to-face contact, and changing alarm resolution procedures. Airports and screening service providers need to agree new standard operating procedures (SOPs) with their appropriate authorities and ensure that they are reflected in airport SOP documentation, the airport security plan, security training and quality assurance activities.

### Physical Distancing

8.4.2 In the immediate future when recovery operations are underway, there will likely be a need to continue a form of physical distancing for people waiting in the queueing lines for security screening. This will only be sustainable in the short term. Security providers should establish markings on the ground within the queueing area to indicate the proper distancing recommended by the appropriate authorities. Passenger preparation officers should be deployed to ensure passengers are prepared for the divestment requirements as well as ensuring physical distancing measures.

8.4.3 To assist this, signage should be provided at the entrance of checkpoint queueing.



(Courtesy of Hermes Airports)



(Courtesy of Hermes Airports)

8.4.4 If secondary screening needs to be conducted, similar physical distancing measures should be applied. The secondary screening rooms should have protective shields installed like plexi-glass to separate the screening agent and passenger being screened.

8.4.5 Other areas of focus would include staff breakrooms and training rooms. These rooms should be marked and possibly outfitted to support physical distancing guidelines. It should be made known that these rooms are not areas to remove or discard PPE. Procedures and possible specific rooms for removing PPE when completed use should be considered for staff.

### **Cleaning and disinfection**

8.4.6 In line with operations during the pandemic, screening staff or an appropriate agency should conduct routine cleaning and disinfecting of frequently touched/exposed surfaces and security screening equipment, including trays at the security checkpoint and baggage areas. Airports should consider disinfectant carpets as part of minimizing the spread of the virus. Consideration should be taken that staff operating screening stations will need to exercise physical distancing guidelines and, therefore, processing times could be longer than usual.

## **8.5 Security Screening**

8.5.1 A key concern that security operators need to evaluate is the capacity of the checkpoint areas using health measures during recovery. Physical distancing will create new constraints on security checkpoints currently in place and, therefore, airports should conduct overall evaluations on not just the capacity of the security checkpoint but in various parts of the airport. In addition, checkpoint layouts may need to be modified to meet physical distancing requirements, adding to the capacity constraints involved. Security staff should be familiarized on the new layout, distancing requirements and hygiene measures of the checkpoint prior to restarting security screening.

8.5.2 Further information on how to evaluate capacity, understand impacts through simulation and other physical modifications to checkpoints can be found in the ACI Europe's Off

the Ground Working Paper under Chapter IX – Phase 1 Limited Operations.<sup>2</sup> Users can also access the ACI Security Checkpoint Modelling videos provided by ACI World on the ACI World website.<sup>3</sup>

## 8.6 Restarting Security Checkpoints

8.6.1 Following a prolonged shutdown, a significant portion of security screening equipment will have been offline and will need to be reactivated prior to reopening of the checkpoint.

8.6.2 For security equipment that has been unused, maintenance checks should be performed, updates of any software and algorithms implemented, equipment recalibrated and tested prior to reopening. Boarding card scanners or automated gates will need to be tested and ensure that the correct flight schedules are uploaded into the AODB. Any crowd management software or queue monitoring solutions need to be calibrated and will be vital to ensure that groups of passengers are not congregating in the security checkpoint. All of this should be conducted in sufficient time prior to start-up to make adjustments and engage with suppliers if needed.

8.6.3 The security checkpoint will need to be deep cleaned and disinfected prior to opening, especially frequently touched surfaces and trays. This cleaning will need to be periodic and consistent throughout the hours of operation.

### **Hand Searches**

8.6.4 In an effort to reduce the spread of the virus as possible, screeners should minimize the use of hand searches, if allowed by the appropriate authority. Screeners should reinforce communication with passengers in front of screening equipment, so they have properly divested and are less likely to cause an alarm. Consider minimizing resolution needed and reduce random search only if the regulator agrees to such measures after conducting a threat and risk assessment concerning them. Hand searches can be supplemented by explosive trace detection (ETDs) and hand-held metal detectors (HHMDs), where the appropriate authority agrees, reducing the hand contact.

### **PPE**

8.6.5 During recovery efforts, screeners will most likely be required to wear protective equipment while on shift. When security inspection personnel are on duty, disposable gloves should be provided to the staff as a minimum.

8.6.6 Attention should be paid to the following points:

- Hands should be disinfected before wearing PPE.
- Protective masks should be changed every four hours.
- Caps should fully cover all hair, including shock hair on the hairline.
- Long hair should be fastened tightly on top the head and put into the cap, and the edges of caps should fit close to the sides of ears.
- Protective equipment needs to be replaced immediately when exposed to a passenger's blood, vomit, and other potentially contagious body fluids.
- Hands should not touch faces when taking off protective equipment.
- The removed disposable protective equipment should be put into medical waste bags.

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<sup>2</sup> Further detailed information can be found by contacting ACI Europe/ACI World.

<sup>3</sup> ACI Security Checkpoint Modelling - <https://store.aci.aero/form/security-checkpoint-modelling/>

8.6.7 A method should be put place to collect the discarded gloves and masks as they may be considered hazardous material.

8.6.8 To reduce transmission, the installation of Perspex covering should be considered at stations where passengers spend more time at the process, such as the bag searching area. If the airport uses a remote screening room, workstations should be distanced and ensure at least 1.5 m in between each viewing station.

### **Service Level Agreements**

8.6.9 Procedural changes will affect the capacity and throughput of the checkpoint which may require a change in service level agreements and should provoke a discussion with all affected stakeholders on the lead time required for passenger to check in. The checkpoint spatial requirements could be different with physical distancing requirements.

8.6.10 Areas of impact could include:

- Queue area – Staff may be required to manage queue and physical distancing. If capacity permits, airports should not open two lanes together but should open single standard lanes in order to prevent a congregation of passengers in proximity.
- Preparation area – Passengers may congregate in this area, and if capacity permits, the airport should consider closing off areas that do not allow for adequate physical distancing during preparation.
- Boarding passes and other travel documents presentation to security personnel should be done, to the extent possible, without the need of physical contact and in a way that will minimize face-to-face interaction. Passenger wayfinding and signage should be deployed to clearly inform them of each steps of the process. It is recommended to offer a self-scanning process of the boarding pass at entrance of the screening area.
- Divestment area – If multiple divest stations are used, there could be a need to maintain the physical distance spacing. To prevent passengers from mixing, there may be a need to consider only serial passenger divestment or by closing off one in every two divest stations if using parallel loading.
- Where regulation allows, consider equivalent screening methods that reduce face to face or physical contact.
- Re-check – With this procedure, staff will be required to wear PPE and may even consider sanitizing gloves. Some screening equipment such as ETD swab holders may need to be sanitized after each use due to contact with passenger belongings.
- Redress area for packing should also provide physical distancing arrangements.

8.6.11 All of the above changes could have significant impact on spatial requirements at the checkpoints.

## **8.7 Actions**

- Support the ASC in meeting with various stakeholders to discuss timelines for the predicted return to normal passenger volume.
- Work with appropriate authority to agree any new protocols, training, background checks and pass issuance.
- Conduct maintenance checks and testing on equipment that was offline for a significant amount of time.
- Update SOPs and Airport Security Program as needed.

- Provide ground markings in the short term at security checkpoints, to encourage physical distancing in the short term and as required.
- Conduct routine cleaning and disinfecting of frequently touched/exposed surfaces and security screening equipment, including trays at the security checkpoint and baggage areas.
- Provide adequate PPE to security screeners and evaluate the spatial needs of security areas in order to implement new physical distancing measures.
- Evaluate the ability of the airport pass control office to deal with the influx of temporarily laid off employees returning to work, requiring their badges.
- Have a plan in place for the security training according to job role and criticality.

## 9 Airport Experience Management

Revised Guidance as of March 2021

The COVID-19 outbreak and pandemic has required airport customer experience and customer service teams to rethink the meaning of customer care. (See also Human Resources and Employees for Employee Experience.)

Experience management in an airport is a very complex business with a lot of people involved from different airport teams and other stakeholders, such as aircraft operators, retailers, governments and more. To manage the customer experience, the airport operator has to also manage employee and stakeholder experience.



It is important for airports to understand during the crisis how it may affect passenger behaviour, their expectations, and their satisfaction in the future. Airports will need to understand what might prevent people from traveling again, and if there are new drivers of satisfaction in order to ensure that when people are traveling again, their expectations can be met which will, in turn, encourage others to travel. This information will be crucial, especially when the airport enters the period of recovery, to adapt the experience to the potential new passenger needs.

### 9.1 Passenger Experience

9.1.1 Customer experience management is the practice of designing and reacting to customer interactions to meet or exceed customer expectations and, thus, increase customer satisfaction, trust, loyalty and advocacy.

9.1.2 The increased levels of stress experienced by the employees applies to the passengers as well. Passengers who will start traveling again will arrive at the airport with a whole new set of expectations. In preparation for the recovery, it is mandatory to have a good understanding of what these new expectations and behaviours will be.

9.1.3 The airport operator and all the stakeholders must rapidly design an entire new experience for the passenger based on the new COVID-19 reality.

9.1.4 Some of these new experiences can be determined by the following means:

- The voice of customer surveys allows airports to understand what was driving the satisfaction in the past and anticipate the new drivers. Measures should build consumer confidence and be regularly monitored using established benchmarking surveys to ensure that they meet or exceed customer expectations and to manage passenger perception.
- Passenger personas and segmentation, when available, allow airports to humanize the interaction with the customer and to make the design of the post COVID-19 experience more concrete and accurate.
- The journey mapping, when available, is a precious tool to adapt the experience. It provides an overview of the full journey, with a specific focus on customer touchpoints or moment of truths. Thus, the airport can design a new moment of truth according to the new reality (physical distancing, physical operations touch free, sanitization, etc.).



- Key performance indicators (KPIs) to track the efficiency of actions and, if needed, adapt rapidly.

## 9.2 Where to Start?

9.2.1 Before the COVID-19 pandemic, airport customer experience management was focused on promoting and fostering positive customer emotions and perceptions through all interactions with an airport community. Airport staff used to be a key component in delivering a memorable experience and making the passenger journey as enjoyable as possible. They remain significantly important for the passengers but during the recovery, their focus will have to be safety, sanitation and building trust.

9.2.2 According to the ASQ 2020 Global Traveller Survey,<sup>4</sup> 48% of the respondents who travelled in 2019 mentioned that they were likely to travel by air again within the next three months. Although intention does not always translate into behaviour, these results demonstrate travellers' desire to start travelling again quickly. The speed of the recovery will not be the same for each region. Travellers from Africa, Middle East, North America and Europe are more likely to resume their travel activities sooner than travellers from Asia-Pacific and Latin America/ Caribbean.

9.2.3 Besides the geographical factor, several other elements such as reason to travel, level of confidence in airports' environment and travellers' concerns about the crisis will influence how fast they will start travelling by air again:

- Segments travelling by obligation, whether it is for business or personal reasons, will return faster. Indeed, 59% of business travellers intend to travel within the next three months, with a higher proportion of domestic trips. Of respondents who will be travelling mainly for personal reasons, slightly more than half (54%) want to travel within the next few months. The distribution between domestic and international traffic is almost equal. Travellers who fly on vacations are more likely to wait before travelling again. This segment of passengers will not avoid airports within the next few months, but it is more likely to see them wait before resuming their habits.
- The eagerness to travel again can also be attributed to a strong level of confidence in airports and airlines, as 80% of travellers are confident that the two entities will provide a safe environment.
- Several uncontrollable variables can be perceived as limits to travel such as initiatives that authorities might have to put in place to limit the spread of the virus and the evolution of the crisis itself. One of the main obstacles to future travelling is the need for quarantine either at their destination or on return. Indeed, 76% of respondents said that they would not travel if they needed to put themselves in quarantine. This result reinforces the fact that quarantine is a major hurdle for the industry's recovery. While this barrier will have an impact on the intention to travel for all regions, it is even more of a constraint for travellers from North America, Asia-Pacific and Europe.

## 9.3 New Set of Expectations, New Measures

9.3.1 The level of confidence in the health safety will help to bring back passengers to the airport. Therefore, airports must put in place all the measures expected by the passengers to regain their trust. The most expected measure is by far the mandatory use of masks for all passengers and airport staff (requested by 48% of all respondents). This measure is followed by

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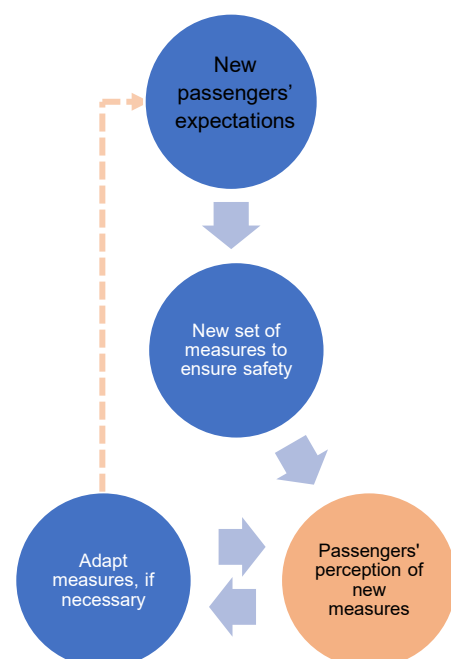
<sup>4</sup> ASQ 2020 Global Traveller Survey, COVID-19: Understanding Future Behaviours for a Successful Recovery, September 2020, online survey conducted among 4,100 respondents from 30 countries.

a COVID-19 test prior to the trip (28%), hand sanitizing stations (28%) and a contactless experience (27%). Some measures generate more interest in specific regions. For example, temperature checks on all passengers are more popular in Africa; a COVID-19 test prior to the trip would reassure passengers in Asia-Pacific and Middle East; hand sanitizing stations are required in Latin America/Caribbean, and a contactless experience would be successful in Africa, Asia-Pacific, and the Middle East. Respondents that are less confident that airports are providing a safe environment to passengers would be reassured by: 1) the mandatory mask; 2) the COVID-19 test prior to the trip; and 3) the contactless experience. Some measures have generated less interest, such as the physical distancing, the improvement of air quality, and the COVID-19 test upon arrival.

9.3.2 These new measures in place serve as important visual cues to reassure the passengers. Therefore, it is critical to not only have the right measures in place, but also to deliver those measures with the optimal approaches.

9.3.3 How to ensure that the right measures are put in place and are delivered according to passengers' expectations? First, effectiveness of the initiatives must be technically proven to support a high level of passenger security and health, that is, to eliminate as much as possible the risk of spreading the virus. Second, passenger perception must be evaluated to ensure that the level of stress and anxiety is decreased – making their overall journey reassuring and more pleasant. Perception of efficiency will vary according to regions and cultures – while employees with full personal protection equipment might be the minimum requirement in some cultures, it might be overwhelming in others – increasing the level of stress and discomfort.

9.3.4 A negative evaluation of the experience might be an indication that not all expected measures have been implemented or that there is a lack in communication regarding the delivery of those measures. It will be the opportunity for an airport to adjust or explore new initiatives to increase passengers' level of trust. Passengers should be provided with extra information, guidance and support to navigate a new set of challenges, and reassurance that all measures are in place to keep them and their families safe. They want a resource they can trust, that can make them feel safe in uncertain situations, and that offers support when so much seems to be overwhelming. Information and guidance provided before their visit to the airport through websites and social media will also contribute to increase their level of confidence before they experience the journey.



9.3.5 For passengers travelling for the first time since the virus outbreak, it will be critical to provide reassurance that the airport is a safe environment. Airports must be ready with measures adapted to the passengers' expectations, but also ready to collect feedback and adjust their strategy in a timely manner. Depending on the speed of the recovery, passenger expectations will likely evolve over time. Airports will have to keep track of this evolution and adapt their strategies accordingly in order to get the most out of their passengers' feedback.

## 9.4 Actions

- Implement the right health safety measures to meet your passengers' expectations. Measure their level of satisfaction towards these measures and adjust if needed.
- Emphasize the importance of your employees and their satisfaction, including the integral role that will have on passenger satisfaction.
- Provide new tools, remote training, and support to enable employees to deliver superior customer experience in a new environment.
- If possible, offer counselling services for employees as part of the employee assistance programme.
- Managers are encouraged to continue to check in with their team and promote discussions around wellness.
- Engage employees and maintain their commitment through suggestion boxes, surveys and remote work groups.
- Use benchmarking surveys in order to be able to anticipate the needs of the future passenger.

# 10 Waste Management

Revised Guidance as of March 2021

Efficiently managing waste may minimize the spread of the disease across the lifecycle, stakeholders and touchpoints of waste management. Primarily, local health authority guidance and regulation should be implemented. Airport operators are encouraged to meet with local health authorities to agree on the waste management procedures.



Applicability of the measures described below depends on their alignment with the recommendations/regulations of the local authority and adaptability to the airport practices. In addition, the knowledge on COVID-19 transmission and associated risks have been constantly updated. It is recommended that while using this material, the original sources are consulted regularly for updates and further understanding the context they were based on. Although currently there is no scientific evidence proving that waste is a vector of COVID-19 transmission, additional measures should be implemented to protect staff while handling contaminated waste.

## 10.1 Risk-based Approach

10.1.1 It is recommended that a risk assessment is performed, based on a source-pathway-receptor approach in a continuous basis (as often as needed and/or possible) to re-evaluate the situation and scale up or down the measures, as required. The airport operator could choose to seek specialist advice, where appropriate, to determine the necessary measures and evaluate their effectiveness.

10.1.2 The approach for managing contaminated waste should be consistent with the following risk management steps:

- Identify the risk.
- Isolate the risk when possible.
- Provide appropriate training to personnel.
- Use personal protective equipment when applicable.
- Sign post whenever possible: bins, bags, signposts for travellers.
- Increase frequency and thoroughness of personal hygiene and equipment sanitization.

## 10.2 Deplaned Domestic/International Waste Management

10.2.1 Waste from international flights in several jurisdictions, including Australia, Canada, New Zealand and the United States, among others, are already treated as biohazard waste; therefore, no extra measures would be required. Some States could start to implement similar rules due to the pandemic.

10.2.2 The WHO recommends that all waste from ill/symptomatic passengers be separated and treated as biohazard waste and be identified for handling and disposal upon arrival. Cleaners/ground handlers should be alerted prior to landing that special handling and/or disinfection (and, rarely, decontamination) may be required. All biohazard waste and other items

contaminated by body fluids are recommended to be handled and disposed through appropriate hygiene services according to national or local authority guidelines for hospital waste management. In this particular case, there is no differentiation between domestic or international flights.

10.2.3 According to IATA, differentiated waste treatment should only be given to flights with symptomatic passengers and/or crew. Partially consumed meals, beverage containers, disposable items, used paper towels, tissues and PPE generated while treating or supporting the passenger or crew, must be placed in the biohazard waste disposal bag (Universal Precaution Kit) and sealed for specialized treatment.<sup>5</sup> Service providers, including cleaning and catering companies, the airport operator and the local health authority should be informed. If no biohazard disposal waste bag is available, it is recommended to place the waste into double plastic bags, seal it, and consider it "biohazard" waste, disposing it according to national regulations for infectious waste; wash hands with soap and water (preferred) or alcohol-based hand rub after handling the items. The bag can be marked with a "biohazard" inscription and the flight details to facilitate tracking. Additional information can be found in the "IATA Cabin Guidance during COVID-19 Pandemic" document.

10.2.4 Airports that use waste autoclaves to sanitize waste, or that incinerate on site (or any similar practices like waste to energy), might have fewer concerns with regards to biohazard risks than airports that do not follow such practices. Depending on the risk, the waste might need to be taken directly from the aircraft to the incinerator/autoclave to limit cross-contamination with other waste. National regulation generally defines special treatment for international waste and these requirements may already include some recommendations and/or options made above.

## 10.3 Building Waste Management (Terminal, Airline, Tenant and Cargo)

10.3.1 As with deplaned waste, it is recommended that the airport follows the advice from local health authorities regarding the management of contaminated terminal waste. Below are some general recommendations for minimizing the risk of cross-contamination or spread of disease through waste handling regarding the disposal of PPE or any other waste contaminated by ill or symptomatic passengers, or by airport staff coming into contact with them.

### 10.3.2 Personal Protective Equipment at the Airport

10.3.2.1 Many airport operators, aircraft operators and local authorities have made it compulsory for passengers to wear masks while on board the aircraft and at the airport. These masks may be disposed of in the terminal or around the airport. Items from symptomatic or ill passenger/staff should be differentiated and their place for disposal should be clearly defined.

10.3.2.2 PPE and waste from ill/symptomatic passengers/staff and health authorities conducting health screening on site are generally considered infectious waste.

10.3.2.3 It is important that passengers and staff know where they can dispose of these masks, especially if they are showing symptoms or are ill. In coordination, airport operators and other stakeholders should consider messaging this information to arriving/departing passengers by posting passenger-facing signage in check-in areas, passenger boarding bridges, hold rooms and beyond to the greatest extent practicable.

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<sup>5</sup> IATA Guidance for Cabin Operations During and Post Pandemic, Edition 4 – 08 Sept 2020  
<https://www.iata.org/contentassets/df216feeb8bb4d52a3e16befe9671033/iata-guidance-cabin-operations-during-post-pandemic.pdf>

10.3.2.4 The WHO recommends that airport operators provide lined waste bins with a lid for disposing of medical masks and tissues of ill passengers and a plan for disposal of this waste, in accordance with infectious waste regulations. Airport operators should provide specific collection points for such waste, in order to avoid being mixed with general or recyclable waste. If this measure is taken, it is recommended to signpost this collection point and other organic, recyclable and non-recyclable bins to discourage ill/symptomatic passengers from disposing of masks or other health and safety-related waste into the wrong bin.

10.3.2.5 If health authorities are conducting health screenings, including COVID-19 tests onsite the airport, and they had contact with symptomatic passengers, their PPE and waste, along with that of the symptomatic passengers should also be treated separately. The US Centres for Disease Control and Prevention (CDC) recommends treating all body fluids (such as respiratory secretions, diarrhoea, vomit or blood) as infectious, and to properly dispose of gloves and other disposable items that came in contact with the sick person or body fluids in biohazard bag or a secured plastic bag labelled as "biohazard".

10.3.2.6 SARS-CoV-2, the virus responsible for the Coronavirus disease COVID-19, can survive up to 72 hours in certain surfaces depending on the humidity content, the room temperature and the surface on which the virus is, amongst other factors. If allowed by the local authority, an alternative to hazardous waste treatment could be to store the contaminated waste for a given period of time (around 72 hours) prior to disposing it. This may not be an option for many airports due to space constraints and operational challenges.<sup>6</sup>

10.3.2.7 Requirements for passengers and staff to wear masks at the airport/onboard the aircraft may cause high volumes of masks being disposed of at the terminal or airport surroundings, like parking lots. Airport operators should consider measures to facilitate passengers' identifying where they can be safely disposed of to avoid littering.

10.3.2.8 PPE from asymptomatic passengers/staff could potentially be disposed of and treated as regular municipal waste, unless national/local regulation states otherwise. According to the WHO, "routine operating procedures for cleaning aircraft, managing solid waste and wearing PPE should be followed in those cases".

### 10.3.3 **Sustainable PPE equipment**

10.3.3.1 Airport operators could consider incentivizing the use of re-usable masks if appropriate and approved by the local health authority to diminish the amount of waste produced by disposable masks.

### 10.3.4 **Managing waste**

10.3.4.1 According to the United States Department of Labour's Occupational Safety and Health Administration (OSHA), other solid waste, including recyclables, should be collected and handled taking the basic precautions that all staff would normally take. This advice is in line with the Solid Waste Association of North America (SWANA), which for the moment recommends no extra precautions to protect waste workers from COVID-19 other than those measures which should already be in place. This includes wearing disposable gloves and masks and doing proper hand

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<sup>6</sup> United Kingdom Department for Environment Food and Rural Affairs, "Guidance on prioritising waste collection services during coronavirus (COVID-19) pandemic," 14 12 2020. Available: <https://www.gov.uk/government/publications/coronavirus-covid-19-advice-to-local-authorities-on-prioritising-waste-collections/guidance-on-prioritising-waste-collection-services-during-coronavirus-covid-19-pandemic#recommendations-for-prioritising-waste-co>. [Accessed 19 01 2021].

cleaning with soap and water for at least 20 seconds after handling the materials. Bags should be securely closed and should not be pressed with the hands to make additional space.<sup>7</sup>

### 10.3.5 **Increasing personal hygiene and disinfection**

10.3.5.1 Personal hygiene and the disinfection of the workplace surfaces and vehicles should be intensified. According to the International Waste Association (ISWA), "the source of danger and cross-contamination is in the interface between the generator (considered to be an individual discharging or depositing their recyclables and waste into a public system) and the handler (the professional who is doing something with the recyclable materials or the residual waste), so proper equipment and intensified sanitizing is recommended to protect operators that have contact with the waste, and also avoid the spread of COVID-19".<sup>8</sup>

10.3.5.2 Some extra recommendations for waste handling are as follows:

- Strict adherence to enhanced hygiene norms, including appropriate replacement and cleaning (if appropriate) of PPE and professional clothing.
- Replacing protective gloves in the event of breakage or any incident of potential contamination.
- Regularly sanitizing waste management facilities, vehicle cabins and other equipment.
- If applicable, workers removing masks and gloves without touching them. This means using correct techniques for putting PPE on and taking it off.
- Social distancing between the workers should be encouraged.
- Training staff on how to use, wear and remove PPE.

10.3.5.3 Some airports suggest disinfecting and cleaning the truck used to transport waste after transporting contaminated substances. Under no circumstances should the bags be pressed or squeezed—to avoid rupture or air escaping the bag at high velocity. Additional training for truck drivers and waste collectors might be required. The same consideration could be given to the cleaning of waste containers.

## 10.4 **Recyclable Material**

10.4.1 Recycling can be kept during this pandemic and could help alleviate the pressure on the waste handlers dealing with the increase in hazardous waste coming from health care facilities.

10.4.2 However, during an outbreak, recyclable material may get contaminated, either by infected used items (e.g., a water bottle used by an ill passenger) or by misplaced waste (e.g., an infected face mask thrown in the recycling bin). For this reason, hygiene measures should be intensified while also ensuring staff is using the appropriate PPE when handling recyclables. It could be considered to store the recyclables for a given period of time—around 72 hours if space is available—to reduce the risk of contaminating staff. If this approach is taken, it is recommended to mark the bags with the collection date and keep them properly stored on a closed room, including considerations on pest control. For more detail, see para. 10.3.4 above on managing waste.

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<sup>7</sup> Solid Waste Association of North America, SWANA, "Guidance on Coronavirus (COVID-19)," SWANA, available: [https://swana.org/docs/default-source/advocacy-documents/guidance\\_on\\_coronavirus-2020\\_03\\_06.pdf?sfvrsn=fee6b88a\\_4\\_2020](https://swana.org/docs/default-source/advocacy-documents/guidance_on_coronavirus-2020_03_06.pdf?sfvrsn=fee6b88a_4_2020)

<sup>8</sup> I. S. W. A.-. ISWA, "Waste management during the COVID-19 pandemic, ISWA's recommendations," ISWA- Available: [https://www.iswa.org/iswa/covid-19/#c7983\\_Rotterdam\\_2020](https://www.iswa.org/iswa/covid-19/#c7983_Rotterdam_2020).

## 10.5 Single-use items

10.5.1 During the pandemic, a temporary relief (or a postponement of implementation) of existing/new regulations which control single-use items may be observed in different jurisdictions. An assessment on the impact of such measures is recommended by the environment departments, including means of transitioning back to the safe use of reusable items.

## 10.6 Landfill waste

10.6.1 Consider the general recommendations on the other sections of this document. In addition, if the airport disposes waste to landfill and has an autoclave available on its premises, it could consider sterilizing the waste from PPE used to handle ill passengers and waste contaminated with body fluids of ill passengers by means of a waste autoclave before it is disposed. Advance coordination with the stakeholders involved, regarding landfill disposal, is recommended for handling potentially contaminated waste at airports which do not have autoclave or sterilizing capabilities in their premises. If the autoclave is not onsite, coordination with the waste hauler is recommended to manage the extra potentially contaminated waste.

## 10.7 Waste Services and Reduction Targets

10.7.1 Some local authorities have limited recycling during the pandemic. These measures, combined with the reduction of traffic, could impact waste reduction or associated recycling targets or KPIs. Therefore, it may be advisable to reassess those based on the current situation. Environmentally friendly alternatives to reduce costs of waste management due to a reduced amount being handled are encouraged to be discussed with relevant stakeholders.

## 10.8 Engagement and Communications

10.8.1 Stakeholder engagement and collaboration are encouraged. Airports should have a written plan for specific recommendations on waste management that should be shared with all stakeholders and constantly updated, as well as relevant information disseminated to all stakeholders across the waste management lifecycle to ensure the new or reviewed waste management process is implemented successfully.

10.8.2 Cleaning staff, custodians/janitors, concessionaires, waste contract managers, waste haulers and management, cabin cleaning crew and management, FBOs and aircraft operators, and many others should also be engaged and kept informed. For instance, additional facilities or resources may be required to differentiate recyclables during collection, separation and disposal processes. Examples of engagement include development and issuance of guidelines and checklists, joint site visits, regular meetings and joint demonstration runs at the initial stage of the operation phase. Airports should also have a written plan to share with stakeholders regarding their waste management procedures.

10.8.3 Joint training of staff involved in the process should be considered. As tenants may need to hire new or re-hire laid off staff, support with (re)training on handling and disposing waste could be considered.

10.8.4 Airports at a national/regional level are encouraged to collaborate to develop consistency of approaches. This could help aircraft operators in their planning for handling of aircraft waste and encourage common best practices at national levels.

10.8.5 Communications can support implementation of measures and build passenger and staff confidence.



10.8.6 To maintain employee morale and build passenger confidence, an airport should consider communicating to the public all initiatives which have been implemented to prevent the spread of COVID-19 and to protect passengers and staff. Communicating new/additional initiatives on handling of waste and its disposal could be included, even if it is temporary and risk-based. This should be done in coordination with all stakeholders involved in waste management at the airport and should be audience-specific (of messaging, delivery, formats and locations).

10.8.7 Consideration should also be given to educating the passengers with clear signage on where to dispose PPE or other relevant types of waste to avoid littering at and around the airport. Where existing waste management signage is in place, consider adding visuals of these items to reduce passenger and staff confusion and increase health and safety by maximizing proper disposal.

## 10.9 Actions

- Consider measures to protect staff while handling contaminated waste.
- Follow the region/local-specific guidelines, including those from the local health authorities, and constantly monitor their development.
- Educate passengers and staff to properly dispose potentially biohazardous waste to avoid cross-contamination. Airports could consider using clearly marked no-touch bins inside the terminal areas with specific coloured plastic bags inside them for this purpose.
- Recycling can continue during the pandemic and could alleviate the pressure to handle increased amounts of hazardous waste from medical facilities.
- Develop airport guidelines/procedures that:
  - are risk-based, outcome-driven and be supported by medical/scientific evidence
  - are simple and practical
  - balance the need for reassuring staff and passenger safety with managing associated risks, and
  - are constantly reviewed for impact, suitability and effectiveness.
- Coordinate and collaborate with all stakeholders responsible for any step of waste handling, disposal, communications, and training.

# 11 Recovery Communications

## Revised Guidance as of March 2021

Airports must have robust and tested plans and procedures in place to ensure that clear and regular communication with passengers, the media and stakeholders can be maintained under all circumstances.

These plans and procedures are of even greater importance during and after incidents and operational disruption.

The way the impacts and effects of the COVID-19 pandemic unfolded across the world, however, placed unprecedented pressure on airport communications teams. Airports have had to maintain clear communications to staff, passengers, and stakeholders, often with limited or reduced resource, and, in many cases, while working remotely.



As preparations are made to support operations during a more sustained recovery period expected in 2021, it is important that airports are able to match operational and communications activity.

### 11.1 Airports and public health

11.1.1 The COVID-19 outbreak began as a public health issue for airports, requiring them to consider the adoption of measures to protect the health and welfare of travellers, staff and the public, and to reduce the opportunities for dissemination of the virus.

11.1.2 Initially, measures were introduced to protect against the transmission of the virus. Communications were designed and planned to support the effort to reduce exposure at airports and to improve the response to the health-related emergency.

11.1.3 To support this, ACI advised that communication links should be established by the airport with internal and external partners. Developing close links with local government, regulators and public health bodies allows for a better flow of information with these bodies so developments can be communicated to passengers, staff and stakeholders, and partners.

11.1.4 To ensure public confidence, airport operators should be prepared to explain to passengers, as fully as possible, the reasons for any necessary health-related measures.

11.1.5 These communications networks should, include:

#### **Internal**

- Aircraft operators
- Ground handling agents
- Air traffic management or air navigation service providers
- Local hospital(s) and health providers
- Airport medical service providers
- Emergency medical services
- Police
- Customs and immigration
- Security providers

- Airport retailers and food and beverage services
- Information/customer relations services
- Other stakeholders as necessary

#### **External**

- Local/regional/national governments, regulators and public health authorities
- Travellers (before, during and after the airport experience)
- Other airports in same region or network
- Travel agents and hotel associations
- Tourism organizations
- International organizations involved with migration, where appropriate
- Press and media

11.1.6 Through social media, airport websites and the press, and direct communication to passengers and staff through announcements, physical and digital displays and email, communications teams should provide information on hygiene and sanitation, and any new health procedures, such as early examples of health screening.

## **11.2 Operational Restrictions**

11.2.1 As the pandemic continues to unfold, with sporadic and intermittent signs of recovery, national regulators and health authorities continue to introduce measures directly affecting aviation, including travel bans and restrictions. These measures, coupled with decisions taken by aircraft operators on traffic, continue to dramatically affect airport operations. Airports around the world have had to adapt capacity, managing infrastructure such as terminals, concourses, piers and parts of the airfield.

11.2.2 To support this, airport communications teams should be focused on communicating to passengers, staff and stakeholders on the changes in operations and reductions in services, as well as the closure of terminals and infrastructure so that those who were still required to work or needed to travel could navigate the new arrangements.

11.2.3 Airports have had to ensure that they remain equipped to continue to communicate effectively with passengers, the media, and partners and stakeholders as the COVID-19 pandemic developed. Special consideration has been given to how communication can be maintained in the event that staff have been required to work remotely.

11.2.4 As the industry continues to plan for a more thorough restart and a sustained long-term recovery, airports will need to work out how best to communicate to staff and passengers how any reopening of infrastructure or resumption of services will be delivered.

## **11.3 Preparing for continued recovery**

11.3.1 To address public concern over travel and the spread of COVID-19, governments and public health authorities have in many cases supplemented airport practices with new passenger and staff processing procedures. Airports have an important role to play in rebuilding the trust that aviation and travel is safe and does not pose a risk to public health—and communications will be at the forefront of this.

11.3.2 Experience around the world has shown that the restart and recovery of operations has been gradual and staggered, and governments and public health authorities have posed new restrictions that affect operations.

11.3.3 Critical to the success of a sustained recovery will be the communication links that have been established by the airport with internal and external partners and with local government, regulators and public health bodies (outlined above). These networks will allow information provided—or new procedures advised—by these bodies or developed in close collaboration with the public health authorities, to be communicated to passengers, staff and stakeholders and partners swiftly, clearly and consistently.

11.3.4 Airport communications teams will need plans in place to help ensure that the requirements to meet these new procedures are understood before staff and passengers arrive at the airport, if possible.

11.3.5 The purpose of this communication will be to:

- Keep passengers, staff and stakeholders updated on restart and recovery timelines, highlighting when services will return or when facilities will be reopened.
- Help ensure that passengers and staff are aware of any new processes or procedures whether they relate to actions that individuals need to take themselves prior to travelling or returning to work or are new processes that have been introduced at airports that will have an impact on the airport experience.
- Reinforce public health authorities' messaging and information on the efficacy and reason for new procedures—or new approaches—to facilitate air travel to reassure passengers and staff that their health and safety remains the priority.
- Provide passenger and staff information as to any changes in the physical access to the airport or infrastructure (changes to surface access, for instance).
- Provide clear information on any new airport procedures, requirements, or restrictions that they will need to understand—and submit to—if they wish to travel.

11.3.6 It is important to note that airports are diverse and sophisticated communities that bring together different players across many sectors. As restrictions on travel are lifted and connectivity begins to return, communication will play an important role in bringing the entire airport community together to understand and meet the challenges of restart—not just in communicating with staff employed directly by the airport, but also with all partners across the campus.

11.3.7 This will help to ensure consistent communication with all staff employed at the airport and, crucially, that passengers will receive the same message from each of the service providers that they come into contact with at the airport before, during and after their journey.

11.3.8 In striving to ensure that passengers are aware and cognizant of any changes to the way they travel, direct communication to passengers has included, but is not limited to, direct email communication through regular updates and newsletters, social media activity, announcements through public address systems, displays on digital information screens within the airport, and through customer assistance staff on the ground.

11.3.9 As regards indirect communication, it is also crucial that clear messages are provided to the press and broadcast media through regular updates and appropriately timed press conferences with senior management where necessary.

11.3.10 Of critical importance in this process is the internal relationships between the corporate, communications, commercial and operations teams. It is important that the communications team knows and has access to key people at every level of the operation and that, crucially, these operations teams know and trust the communications staff—the lines of communication need to be two-way and respected.

11.3.11 The process of ascertaining operational information and approving and issuing communications needs to be well-understood and teams well-drilled. Airports need to have systems and controls in place to ensure the fast transfer of information and the swift approval of communications so that the most up-to-date and relevant information can be provided swiftly.

## 11.4 Flexibility and Responsiveness

11.4.1 The way that the effects of the COVID-19 pandemic have unfolded has shown the value of flexibility and responsiveness in the face of an evolving and persistent crisis. This is a lesson that will need to be carried through as airports plan for recovery and restart.

11.4.2 Communications teams will need to have prepared flexible plans so that they can be scaled up or down as the recovery escalates and, potentially, de-escalates again. Communications teams should explore potential scenarios in advance.

11.4.3 This will allow for basic messaging, communications lines and collateral, and media statements to be drafted and approved ahead of time so they can be quickly amended with information specific to the restart and issued swiftly. This will reduce the time taken to provide the critical first response to issues as they happen, and teams can then remain flexible and fleet-of-foot to stay in control as things unfold.

## 11.5 Actions

- Re-establish communication links between the airport and internal as well as external partners.
- Utilize the channels available to provide information on health and sanitary measures, as well as new health procedures.
- Ensure that staff is equipped to communicate effectively to stakeholders even when working remotely.
- Create an internal communications plan to help ensure that the requirements to meet new health procedures are understood before staff and passengers arrive at the airport.
- Create a clear, swift pathway to approve communications for dissemination.

## 12 COVID-19 Testing Facilities at Airports

Added Guidance as of March 2021

### 12.1 Background

12.1.1 The lifting of travel restrictions and quarantine is a vital element for the restart of aviation. To this extent, the International Civil Aviation Organization (ICAO) has provided recommendations for action to States through the Council Aviation Recovery Task Force (CART) and developed guidance on health matters using advice from aviation medical and health experts from governments and industry through the Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation (CAPSCA).



12.1.2 CAPSCA published on 4 December 2020 the **ICAO Manual on Testing and Cross-border Risk Management Measures**.<sup>9</sup> COVID-19 testing, if applied according to the guidance contained in the Manual, could reduce reliance on measures that restrict air travel and the movement of persons arriving in a country, such as quarantine, which evidence suggests is a disincentive to several important categories of travel of which the following list is non-exhaustive: pilot certification, pilot simulator training, essential business flights and tourism for some States which are dependent on inbound tourism for economic sustainability. Furthermore, the Manual describes the risk management measures which can be applied; how epidemiology can be used to advise States in developing a risk management strategy; possible testing protocols which might be put in place where there is differential prevalence, and therefore risk; and a series of examples to help States in their decision-making process.

12.1.3 The **ACI Advisory Bulletin – Key points on testing and quarantine**, issued in December 2020,<sup>10</sup> highlights some of the key issues from the Manual for airports and provides support for discussions with regulators and government officials on the necessary steps and policies to enable the safe restart and recovery of the industry.

Key points regarding testing specifically:

- When addressing higher risk scenarios and applying testing as part of the multilayer risk management strategy, States should take into account the test result when considering the need for and duration of quarantine.
- Testing should be performed by individuals trained to perform the test at a site approved by the appropriate authorities. The test outcome should be a confirmed test result that the traveller can present to authorities.
- Post-arrival screening, in conjunction with pre-departure testing, can result in risk reductions. Consequently, as part of a State's risk assessment and determination of risk tolerance, it may consider reducing quarantine time frames.

<sup>9</sup> <https://www.icao.int/safety/CAPSCA/PublishingImages/Pages/ICAO-Manuals/Manual%20on%20Testing%20and%20Cross-border%20Risk%20Management%20Measures.pdf>

<sup>10</sup> <https://aci.aero/wp-content/uploads/2020/12/201218-Testing-and-Quarantine-Advisory-Bulletin-FINAL.pdf>

- One specific type of test is not recommended over another. The minimum values of 95% for sensitivity and specificity, however, will allow for a wider range of tests to be used that are currently available. This range also allows for the use of rapid antigen tests as a screening device which are more accessible and practical for application in the aviation environment; and are faster and cheaper to use. In addition, it would reserve the more expensive RT-PCR tests for use in clinical settings.

12.1.4 The reliability and usefulness of testing for COVID-19 (SARS-CoV-2) depends on many factors, including the incidence of infection in the population being tested, the SARS-CoV-2 assay type and performance, the type and quality of the specimen tested, timing of the specimen collection as it relates to exposure to the virus and the turn-around time for results.<sup>11</sup>

12.1.5 Generally speaking, testing should be fast, accurate, scalable and affordable using technology that can be easily operated without creating an additional burden on healthcare systems.<sup>12</sup> There are various testing options currently being trialled around the world, but based on the current lessons learned, pre-departure testing is preferable to testing on arrival, as it increases the traveller's confidence that they are not currently infected and reduces the possibility for them (as well as possibly their travelling companions) being stranded at their destination. Testing as close to the time of departure as possible is recommended, as testing too far in advance of travel reduces the effectiveness of pre-departure screening. Pre-departure testing also further minimizes the potential risk that the virus is being transmitted during travel to/from the airport.

12.1.6 It is recommended that local stakeholders, e.g., airport operators, public health authorities, regulators, air carriers, etc., run planning scenarios based on available airport footprint, scalability, customer convenience and operational impact prior to deciding on a specific implementation model. Once a model is selected, reviewing the assumptions and monitoring the performance metrics on a regular basis is key to ensure that demand and performance requirements are met. Where improvements in the process or in the operational procedures are required, stakeholders should work in collaboration to agree on necessary changes or enhancements.

12.1.7 There are several different types of testing technology that may be used for screening of international travellers:

- Polymerase chain reaction (PCR) technology performs very well for diagnostic testing of suspected cases, but it is ill-suited to screening of travellers as it is slow, invasive and expensive to perform.
- Antigen tests are both quicker and more cost effective, and these types of tests continue to evolve quickly with new approaches in development and existing testing technologies constantly improving their performance and enhancing their ease of use.
- RT-LAMP<sup>13</sup> Tests: Similar technique to conventional RT-PCR tests, with the exception that the nucleic acid amplification occurs at a constant temperature; therefore, equipment such as expensive thermal cyclers used to regulate sample temperature in PCR tests are not required. Some point-of-care and near point-of-care test kits using this method have recently been commercialized and approved for use, including several in the European Union and the United States. These tests report high levels of sensitivity and specificity against RT-PCR, but it remains to be seen how quickly the use of point-of-care RT-LAMP can be scaled up.

<sup>11</sup> World Health Organization, COVID-19 diagnostic testing in the context of international travel: Scientific brief, dated 16 December 2020

<sup>12</sup> Safely Reopening Borders – A Practical Guide, IATA 2020

<sup>13</sup> Short for "Loop-mediated Isothermal Amplification"

Depending on the cost, the technology may however prove to be a more viable option for use in the context of, for example, pre-travel testing than antigen testing.<sup>14</sup>

12.1.8 Both the IATA Safely Reopening Borders and the ICAO Manual on Testing and Cross-border Risk Management Measures include further details on the types of tests being trialled in airports.

## 12.2 Testing Implementation models

12.2.1 So far, we have seen several COVID-19 testing implementation models that have been trialled in airports around the world. Although experience with the deployment of testing capacities is still quite limited, several valuable conclusions can already be drawn.<sup>15</sup> To be suitable for use as part of the air travel process, COVID-19 tests should meet the following criteria:

- a) **Accuracy**  
Very high levels of reliability, both in terms of sensitivity –minimal number of false negatives, and specificity –minimal number of false positives. Test accuracy should be certified by reputable national or international authorities.
- b) **Speed**  
To avoid unnecessary disruption to the travel process, rapid tests should be favoured when they are deployed in the airport environment. The sampling should be done rapidly, and the results should be processed within minutes.
- c) **Scalability and availability**  
The implemented solution should have a capacity able to meet the initial demand and be scalable over time in order to avoid delays and passenger inconvenience. Furthermore, current and future national testing capacities (including laboratory supplies, trained personnel and personal protective equipment (PPE)) should be also evaluated as part of a national response strategy for COVID-19.
- d) **Ease of use and acceptance**  
The testing process should be designed to be as straightforward as possible to implement in order to minimize the impact on passenger experience and to ensure the consistency and effectiveness of the process. This must include clear communication to passengers on what they should be expected to do.
- e) **Affordability**  
The cost of testing should not constitute a barrier to travel and should be kept as low as possible both in terms of hardware, equipment, supplies and operational resources required to conduct the tests. Where testing is a mandatory requirement, the WHO's International Health Regulations (IHRs) state that neither passengers nor carriers should bear the cost of testing.

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<sup>14</sup> <http://www.oecd.org/coronavirus/policy-responses/testing-for-covid-19-how-to-best-use-the-various-tests-c76df201/#back-fnotea0z3>

<sup>15</sup> IATA, Safely Reopening Borders



## 12.3 Testing location considerations

12.3.1 As previously mentioned, pre-departure testing is preferable to testing on arrival as it increases passenger and government confidence while ensuring that the air travel environment is 'COVID-clean'. There are several benefits and challenges associated with the location of the testing implementation models, including the following:

### 12.3.2 At the airport

Depending on the local requirements, the required capacity is deployed at the departure or at the arrival airport.

Benefits	Challenges
Testing is embedded into the current airport experience	Impact(s) on airport capacity and footprint, depending on local conditions
Communication, standardization of test results and trust is higher since the airport is a "controlled" environment	Scalability overtime in order to avoid delays
Does not create much additional requirements for passenger prior to the day of travel and/or arrival at the airport (time spent waiting for registration or results)	Testing methodology must be fast to: <ul style="list-style-type: none"><li>• limit the operational impact</li><li>• provide passenger confidence that they will have their test result in time prior to travel / arrival</li></ul>

### 12.3.3 Off-airport

Testing services located off-airport are those that are not physically integrated in the airport environment. When testing is required prior to departure, passengers will arrive at the airport compliant with their test requirements. When testing is required on arrival, passengers may leave the airport "untested" and take their test in designated facilities within a specific timeframe and quarantine whilst waiting for the results (if applicable).

Benefits	Challenges
<ul style="list-style-type: none"><li>• No impact on actual airport footprint</li><li>• Lay-out and operational efficiency of the test facility do not impact on airport operations</li></ul>	Some passengers may arrive at the airport without knowing they had to take a test
Easily scalable (depending on local specificities)	Standardization and communication of test results from service providers to passengers
Airlines, airports, public health authorities and other stakeholders can develop partnerships with local testing providers that are available to facilitate access to the passengers	Air transport stakeholders have no control over the deployed capacity
	Test results may not always be obtained within the timeline imposed by the state of destination
	Not well suited to testing upon arrival models as it requires directing passengers to specific testing facilities

#### 12.3.4 Mixed model

In addition to the two models described previously, the mixed model is the one where passengers have the option to take their COVID-19 test at facilities located at the airport and at facilities located off-airport environment.

Benefits	Challenges
Tests conducted off-airport can help to lower the operational impact of testing implementation	Combination of the challenges identified in both models listed previously
Provides flexibility to air travel industry stakeholders to design the best process for given location and operational requirements	Capacity planning requires an understanding of the ratio of passengers that will test at the airport and off-airport
Provides flexibility and alternatives to the traveling public	

12.3.5 The decision whether to conduct testing at the airport terminal itself or off-airport (or in the vicinity) will depend on a quantity of factors, including the following:<sup>16</sup>

- a) **Demand for testing**  
The volume of passengers affected by testing requirements will vary from one country to another depending on the air travel routes that are operated and associated specific requirements of departure and arrival countries.
- b) **Footprint requirement and availability**  
Depending on the volume of traffic (and therefore testing required), the footprint needed will vary considerably. Footprint requirement is a function of demand for testing, speed of processing at the testing facility and the ratio of passengers that have already a test result when they arrive at the airport (in case of a model where tests are implemented prior to departure).
- c) **Scalability**  
It is important to understand how a testing facility could be scaled up when the testing demand will increase significantly through time. Selecting an area that could scaled up to cope with an increased demand is important.
- d) **Customer convenience**  
Local key stakeholders may want to offer various options to their customers and not force them into a single process (partnering with a testing service provider delivering a specific passenger experience).
- e) **Impact on operations**  
Implementing testing in an airport environment influences a number of the pre-existing processes (e.g.: downstream capacities, transaction times).

## 12.4 Testing Process Overview

12.4.1 From a process perspective, the following are the most common elements related to passenger COVID-19 testing:

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<sup>16</sup> IATA Safely Reopening Borders

### Registration

12.4.2 Passengers must demonstrate their eligibility to enter the testing facility and proceed to enter in the testing process. The registration process could be initiated earlier in the travel journey through an online process. Depending on national requirements, this step could include a lengthy data collection process such as contact tracing information, medical questionnaire, etc.

12.4.3 Where passengers are tested at the airport, the registration process could become the bottleneck. Designing an effective registration process is a key element of a successful deployment, passengers should be invited to pre-register and fill their data before going to the testing facility to minimize the registration process time.

12.4.4 Airports and their partners should communicate to passengers the process for testing registration and provide links to web portals or mobile applications (APPs) where available. When booking an appointment, passengers should receive all the appropriate instructions about the testing process and the expected waiting time before obtaining the results.

### Sampling

12.4.5 Sampling is the action to collect a sample from the passenger, e.g., nasopharyngeal swab, saliva sample collection, etc. Where testing is deployed in the airport environment, the fastest and most accurate testing technology (antigen) should be used in order to facilitate the integration of testing requirements in the passenger journey.

12.4.6 Furthermore, efficient queue management will be critical to maximize the available footprint of the testing facility, provide passenger confidence when waiting for their results and minimize the impact on airport operations. Ground located wayfinding elements and proper visual signage have demonstrated positive results.

### Analysis

12.4.7 Analysis is the time required to process a passenger sample and get a result. This time can vary significantly from one type of test to another. As samples are being analysed, a number of factors need to be considered to optimize the efficiency of the process selected, such as laboratory capacity and location, ease of scalability and segregation of passengers during result processing. Wherever practical, passengers should be allowed to leave the testing facility as soon as the sampling is completed in order to minimize congestion and facilitate physical distancing.

### Results

12.4.8 Results are the processes through which a passenger and authorized organizations are informed about a test result. Countries already allow passengers to upload their test results on dedicated government portals. After verification, the government issues a token which confirms the passenger's status. The verification and authentication of the test results should be performed in such a way to minimize delays and disruption on departure and arrival. In the future, it will become essential that States recognize the validity of tests performed by other States or outside of their jurisdiction along with the associated results.

### Passenger handling of positive test results

12.4.9 Public health authorities must work jointly with airports, air carriers and other stakeholders to design protocols in order to "deal" with passengers that have tested positive.

12.4.10 In the case of a positive response to an antigen test, passengers will usually be subject to a subsequent molecular test and would have to remain in isolation until the outcome of the second test has been validated. That should not create inconvenience (or minimize) for the staff and the other passengers.

12.4.11 Passengers and their travelling companions who may not be able to fly because they tested positive may be offered flexibility by air carriers, hotels and other parties to re-accommodate their travel plans considering these circumstances.

#### Communications

12.4.12 Clear and timely communication to passengers is essential. Public health authorities should provide information about testing requirements, including any exemptions, notably for children under a certain age. Airports and their partners should also actively communicate relevant information to passengers, such as recommended time to arrive at the airport, location of test sites, documents to bring, designated waiting areas, etc.

#### Transfer Passengers

12.4.13 Passengers holding a negative test certificate on departure —compliant as required by the country of destination— should not be subject to another test during their transfer.

#### 'Exceptional' testing on arrival

12.4.14 It is highly recommended for countries to consider providing some testing capacity on arrival to handle "exceptional issues" generated by factors beyond the passengers and/or the air carriers' control, such as flight delays, weather and operational disruptions, and avoid potential complications associated with such scenarios.

12.4.15 While such exceptional testing capacity on arrival should ideally be deployed prior to entry border controls along the arrival process at the airport, other deployment models could be considered, especially if the testing requirements rely on PCR tests and associated longer analysis and overall processing times, e.g., off-airport medical clinics and testing capacity at airport hotels.

## 12.5 Performance measurement and continuous improvement plan

12.5.1 A number of performance metrics to assist in the prompt detection of process bottlenecks and support subsequent improvement planning need to be identified and agreed by airports, air carriers and other involved stakeholders. Performance metrics should provide both industry stakeholders and regulatory authorities with a sufficient overview of the performance of the testing operation.

12.5.2 At a minimum, the following performance metrics should be monitored on a regular basis:<sup>17</sup>

- Staff Efficiency
- Surface Efficiency
- Sustainable throughput of testing facility
- Passenger Transaction Time:
  - Queuing times
  - Testing transaction times

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<sup>17</sup> IATA Safely Reopening Borders

## 12.6 Managing Test Results and Certificates

12.6.1 As more and more countries implement airport COVID-19 testing models at departure and on arrival, standardization in the way test results are communicated from the traveller to a government is one key element. Considering that the aviation industry is a sector with a high level of standardization, which is essential in smooth cross-border operations, a consistent global approach is needed to encourage safety and increasing confidence and predictability for passengers.

12.6.2 Let's underline four main challenges or practical issues that are faced by travellers and travel industry stakeholders:<sup>18</sup>

- Understanding the health requirements (current and changing) for a given journey.
- When testing is required on departure, sharing of test results between laboratories, passengers and the appropriate regulatory authorities in a trusted, secured and confidential manner.
- Understanding which laboratories are "certified" to perform the test and where such facilities are located.
- Enabling passengers to securely store and share their test results, along with other travel data.

12.6.3 Should a government require incoming passengers to have a COVID-19 test performed prior to their departure, a verification mechanism is needed to guarantee that the test has been performed according to predefined health authority's entry requirements and that it remains valid until the passenger arrives at destination —usually, 48-72 hours prior to arrival. Where possible, this should be performed using a government-owned or government-approved traveller portal or mobile APP, with interactions performed directly between passengers and health authorities.

12.6.4 Since in many jurisdictions, medical information is rightly treated as highly sensitive personal information, all stakeholders involved in the collection, transmission and processing of passenger data should be mindful of this fact.

## 12.7 Operational challenges of implementing testing requirements

12.7.1 It is likely that the implementation of safe and reliable COVID-19 testing to mitigate the risk of cross-border transmission poses substantial operational and logistical challenges at airports and other points of entry,<sup>19</sup> including:

- Investments in staff trained in sample collection, biosafety, testing and result interpretation.
- Crowding within points of entry premises that may increase the risk of COVID-19 transmission and other communicable diseases among travellers and staff.
- Challenges to verifying the authenticity of test results across different countries and jurisdictions.
- For pre-departure testing, false positive results that may cause unnecessary cancellations of travel for the passenger; and false negatives that may result in transmission of disease during travel and quarantine following positive testing upon arrival.
- Resources diverted from more urgent public health needs.

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<sup>18</sup> Idem

<sup>19</sup> World Health Organization, COVID-19 diagnostic testing in the context of international travel: Scientific brief, dated 16 December 2020

12.7.2 ACI also welcomes the rapid development and deployment of vaccines, but there will be a considerable period before they are widely available. During the transition period, tests and vaccines together will play a key role in the industry recovery. As they become more available for travellers, there must be a proportionate approach to vaccination before travel balanced with a risk-based approach to testing. Just as quarantine effectively halted the industry, a universal requirement for vaccines could do the same, and a coordinated and risk-based approach to testing and vaccination going forward will provide passengers with a safe travel environment and foster confidence in air travel.

## 12.8 Results from Interviews and Survey<sup>20</sup>

### **NARITA INTERNATIONAL AIRPORT TOKYO, JAPAN**

The Nippon Medical School Foundation and Narita International Airport Corporation (NAA) opened the Narita International Airport PCR Centre on 2 November 2020 to provide PCR test certificates for customers within a minimum of two hours.

Narita International Airport was the first airport in Japan with a PCR testing centre. The entire process of testing - from registration to the issuance of the PCR test certificates is managed by the Nippon Medical School. This testing facility provides support and comfort for customers departing to overseas destinations by conveniently providing certificates right before their departure through the PCR Centre.

Two facilities have been set up in the terminal buildings, mainly for passengers departing Japan. Certificates are also provided for people who tested negative at a city medical clinic before arriving at the airport, as long as they bring results of their test or medical referral letter.

#### **Overall testing process description**

Process overview

Registration – Consultation – Specimen collection – Test – Certificate Issued

1. Negative PCR test certificates issued in as quick as two hours after request (except for retesting). Until the end of November, the issuance of the certificate may take at least six hours but should decrease when the testing laboratory facilities will be ready to serve in its full capacity.
2. Testing is available without appointment and facility is able to respond to sudden travel needs.
3. Certificates can be issued for tests carried out at other Nippon Medical School Hospitals and facilities as well as other medical institutions.
4. Tests are available to anyone with no symptoms who wish to confirm that they are not affected.
5. The certificates will be issued in English and Japanese and are based on the format specified by the Ministry of Foreign Affairs of Japan (may also be issued in a form specified by destination's government).

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<sup>20</sup> Airport interviews and surveys were originally conducted in October and November 2020 and followed by a content validation in February 2021.

## Description of PCR Tests on Departures

- Testing for departure passengers is conducted inside the terminal building at the airport clinic.
- Departing passengers can have the test without making an appointment. Passengers tested positive are referred to local health centre.
- The resources deployed by the airport are only in terms of infrastructure (impact on capacity) and supplies. Public health authorities and/or airlines will provide related staff.
- Paper certificates are being issued, not through health App or e-forms.
- Test Centre is capable of testing up to 700 people per day, with a breakeven point at 50 passengers. Low usage at time of interview (5 per day), but as of January 2021, the Test Centre is used by 200 passengers per day.



Fully automated gene analysis system "GENECUBE" using RT-PCR and the real-time RT-PCR-based kit "SARS-CoV-2 Detection Kit -Multi-"

(Courtesy of Tokyo Narita International Airport)

## Opening Hours

24 hours/365 days

\* Extra charge will be applied outside the normal business hours shown below

- ① Registration: 9:00 AM to 5:00 PM \*Available without an appointment
- ② Issuance of Certificate: 9:00 AM to 9:00 PM

## Charges

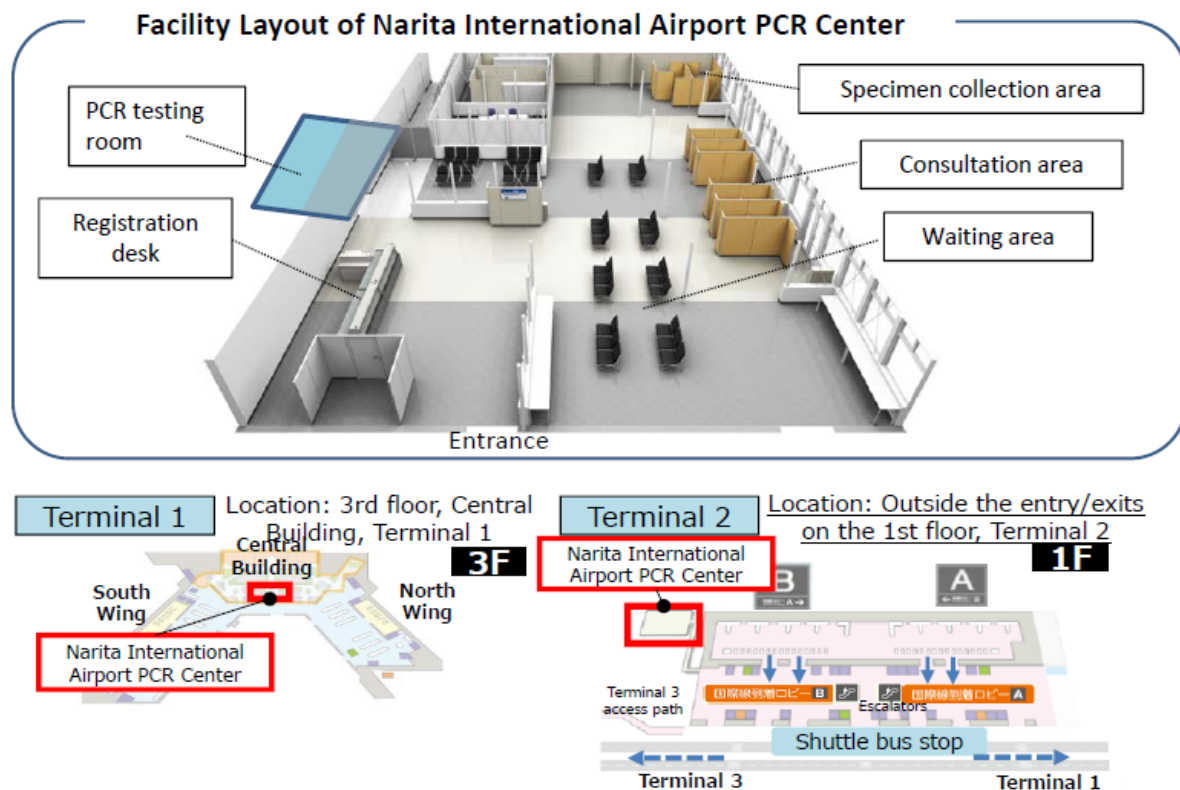
### Testing & Certificate

- With appointment: JPY 32,500
- Without appointment: JPY 46,500
- Non-normal business hours: JPY 46,500

### Certificate Only

- Nippon Medical School Hospitals: Free
- Other medical institutions: JPY 5,500
- Non-normal business hours: JPY 9,000

U R L <https://www.nms-pcr.com/en>



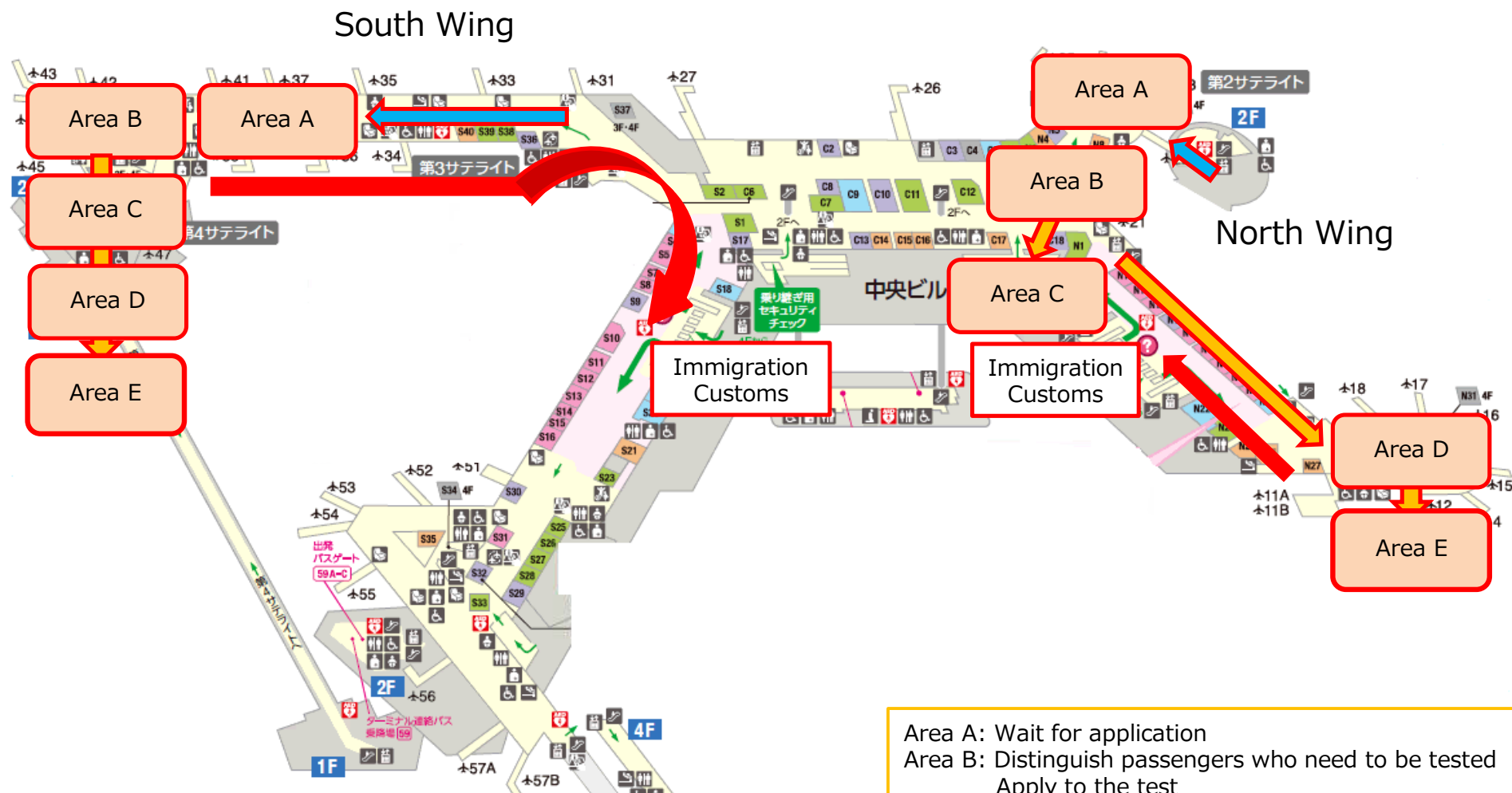
(Courtesy of Tokyo Narita International Airport)

### Description of Antigen Tests on Arrival

- Testing for arrival passengers is conducted at inside the terminal building, before immigration.
- Testing for arrival passengers is mandatory by quarantine inspection. Tested passengers need to stay in waiting area(s) before immigration.
- Quarantine officer/staffs take passengers tested positive to the hotel or the hospital and he/she must stay there until getting a negative result.
- Those who may be false positive will be re-tested with a second antigen test. If the second test is also positive, passenger will be re-tested with a PCR test.
- There is contact tracing using a mobile phone APP.
- Testing capacity is 8,000 passengers per day, results are given within 30 to 60 minutes.
- Tests are conducted to Level 3 countries (considered higher risk).
- Test kit brand is Lumipulse G1200 plus.

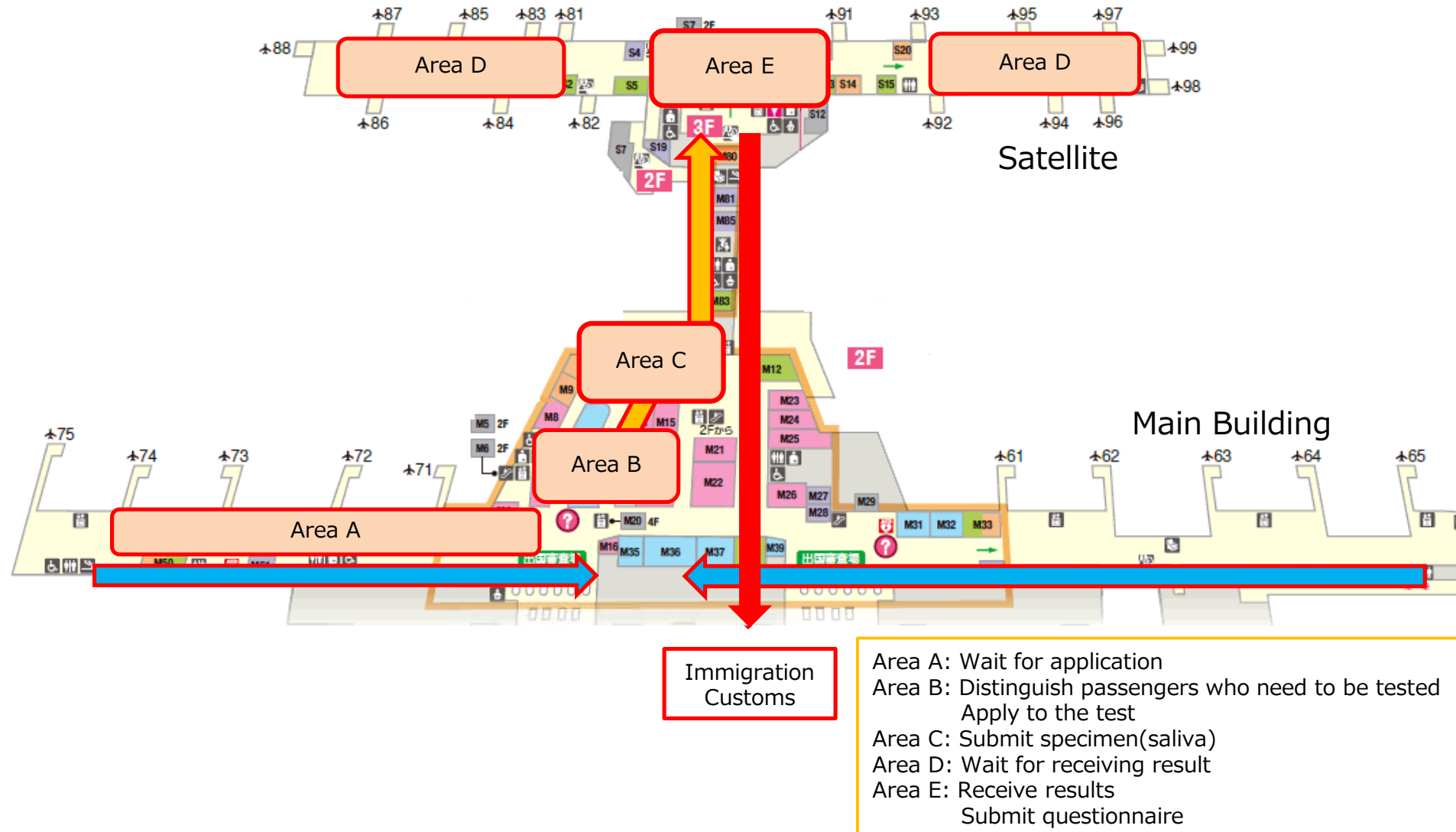


# Floor Plan for Arriving Passengers <Terminal 1>



- Area A: Wait for application
- Area B: Distinguish passengers who need to be tested  
Apply to the test
- Area C: Submit specimen(saliva)
- Area D: Wait for receiving result
- Area E: Receive results  
Submit questionnaire

# Floor Plan for Arriving Passengers <Terminal 2>





COVID-19 Test Centre  
(Courtesy of Tokyo Narita International Airport)



COVID-19 Test Centre  
(Courtesy of Tokyo Narita International Airport)



COVID-19 Test Centre  
(Courtesy of Tokyo Narita International Airport)



COVID-19 Test Centre  
(Courtesy of Tokyo Narita International Airport)



## **HANEDA INTERNATIONAL AIRPORT TOKYO, JAPAN**

COVID-19 tests are performed on both departing and arriving passengers.

- For arrival passengers, mandatory antigen test with saliva are conducted pre-immigration. Passengers must stay in the pre-immigration area before getting the result.
- For departure passengers, PCR tests with saliva are done at the clinic in the airport terminal, only for those who wish to do so or who are required by government at destination.

### **< Arrivals >**

For COVID-19 testing upon arrival, a subsequent test is required only from those travelling from England and South Africa. The mean time to perform testing is two hours on average.

The process of communicating the results to passengers is as follows:

1. Minimum 1 hour to maximum 3 hours to get the results.
2. Quarantine officers are providing the results.
3. Passengers are receiving their results directly, identified by a number.
4. In case a passenger receives a positive result, a quarantine officer will accompany the positive person to the exit of the airport building and a car arranged by the health department will transport the passenger to a hospital or hotel.

If a passenger is tested negative, he/she is permitted to leave to home or hotel. They need to specify the location of their stay (address).

Only those passengers who are coming from England and South Africa are quarantined at the hotel for 3 days even if the result is negative. After 3 days, they are to take a subsequent test and if the result is negative, they will be permitted to leave to a specified address.

Tests on arrival are at no charge to the passenger and paid for directly by the Japanese Government.

The infrastructure resources are deployed by the airport, while staff is the responsibility of the airlines and the public health authorities.

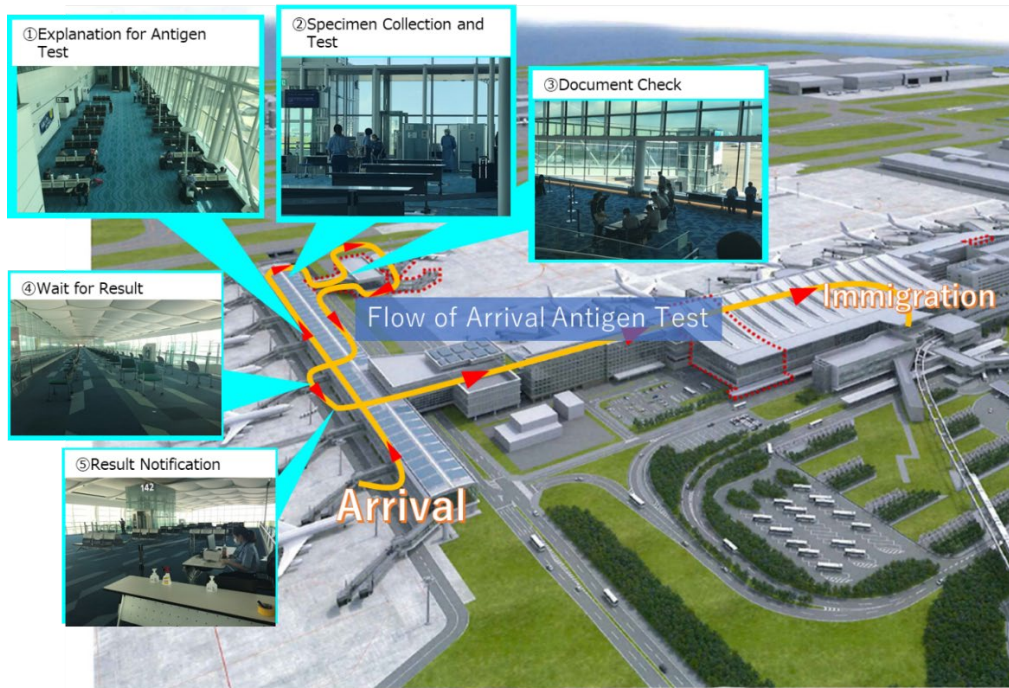
After the test is taken, the passenger gets the pink sheet as proof of negative result. The passenger can pass the quarantine smoothly by showing that pink paper.

### **< Departures >**

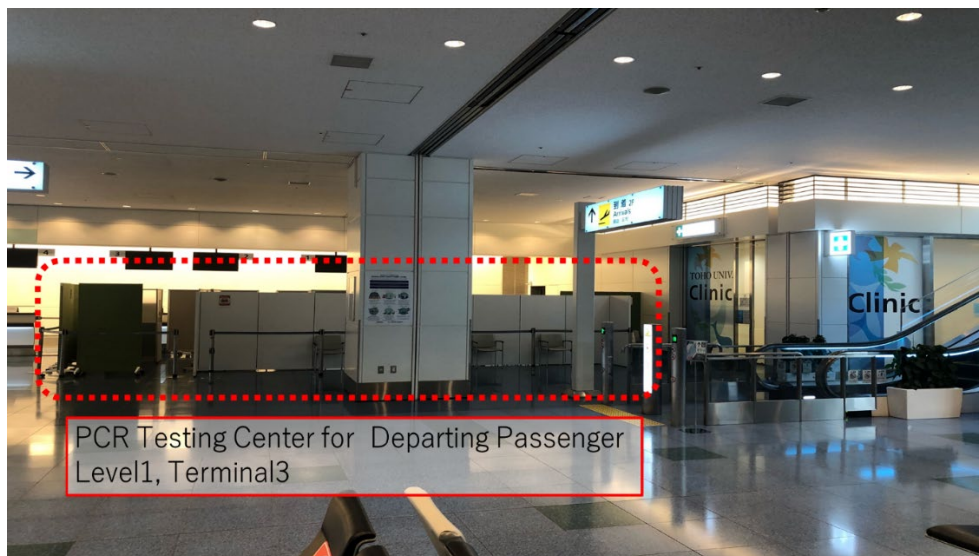
Passengers who wish to take a COVID test at the airport must make an appointment through a booking system such as Tecot to get tested (<https://www.tecot.go.jp/english/>).

COVID-19 tests need to be taken at the airport, four hours prior to departure.

## Flow of Arrival Antigen Test



(Courtesy of Tokyo Haneda International Airport)



(Courtesy of Tokyo Haneda International Airport)

## **KANSAI INTERNATIONAL AIRPORT KANSAI, JAPAN**

COVID-19 tests are performed on both departing and arriving passengers:

- For arrival passengers, mandatory antigen test with saliva, conducted pre-immigration. Passengers must stay in the pre-immigration area before getting the result.
- For departure passengers, PCR tests with saliva are done at the clinic in the airport terminal, only for those who wish to do so or who are required by government at destination.

For departures, tests are conducted before check-in (operated by hospital/clinic), passengers can stay at a hotel or wait at the airport overnight if it takes too long to get their results. A negative result certificate is needed with an ok to proceed.

For arrivals, the quarantine office manages the tests; depending on country of arrival, passengers can get their test results within one hour, then go through immigration.

Ideally, a prior appointment must be made, but any passenger can come to take the test. The general rule is to take the test 72 hours prior to departure; this will depend on the country of destination.

If a passenger tests positive, he/she needs to stay 10 days and then take another test. If the test is negative, no second test is needed; however, passengers will stay in quarantine for 14 days and will not be allowed to use the public transport.

For PCR testing on departure, it takes up to one day to get a result. For antigen tests upon arrival, it takes 45 to 60 minutes for testing and results. Passengers are required to stay isolated while waiting for their results.

Arriving passengers will be advised by a quarantine officer (electronic board) if they have tested positive, while a medical institution will directly advise the departing passenger if tested positive.

### Costs

- PCR test for departing passenger cost US\$ 400, approximately.
- Antigen tests upon arrival are paid by the Japanese Government.

No staff or special infrastructure is provided by the airport for PCR tests before departure. Upon arrival, the facility and staff provided by the airport to sort out passengers in queues confirm that documents are properly filled out. Waiting areas are located near the boarding areas.

### Types of tests used

- Arrivals: LumiPulse
- Departures: Unknown by the airport operator, provided by the outsourced clinic

A Japanese App is used (LINE mobile App) as means of communication between passengers and the government. Government can use it to ask passengers to provide details, such as their address for quarantine purposes and other relevant travel information.

### Capacity

- Arrivals: 1800 passengers per day can be tested, in November the numbers were approximatively 900 passengers.
- Departures: 10 passengers per day to supplement the testing offered by medical clinics located in the city.

## **QUEEN ALIA INTERNATIONAL AIRPORT AMMAN, JORDAN**

COVID-19 PCR testing is required for arriving passengers. These tests are conducted inside the terminal, pre-visa and immigration checks.

### **Passengers Arriving to Queen Alia International Airport (QAIA)**

#### **A. Acceptance at Originating Station**

Passengers are required to present the below for acceptance by the airline at the originating station:

- Negative PCR test done 72 Hours prior to their flights scheduled time of departure from originating station (Note: PCR is not required for children below 5 years of age).
- Health insurance covering COVID-19 for non-Jordanians.
- Health declaration form available on the links below, any passenger gives falsified or incorrect information is subject to a fine of 10,000 Jordanian Dinars.
  - <https://www.carc.jo/images/COVID19/Declaration-Form.pdf>
  - <https://www.carc.jo/images/COVID19/Declaration-Form-ar.pdf>
- QR for Payment bill for PCR test that will be done on arrival. Passengers need to visit the below link to pay the PCR test charges (28 JOD, equivalent to 39.50 USD) and obtain the QR code.
  - <https://registration.questlabjo.com/>
- Passengers are required to install AMAN Mobile Application
- Diplomats and employees of regional and international organizations (and their dependents and family members holding diplomatic passports, special passports or regular passports) residing in Jordan and have a permanent diplomatic QR code that its validity does not expire, it is possible to return with this QR code to Jordan for several trips and are exempted from:
  - PCR test before departure
  - PCR test upon arrival
  - Health insurance
- Health insurance is not required for medical tourism patients who are usually holding a letter from the hospital they will be accommodated in

#### **B. On Arrival**

- PCR test will be done after disembarkation.
- Passengers are requested to share their phone numbers in order to communicate their results to them through SMS.
- Passengers will receive the results maximum in three hours.
- For passengers testing positive, the laboratory informs the Ministry of Health, which in turn will contact the concerned passengers, who will either stay at home or be directed to the hospital, depending on the severity and symptoms. The isolation period depends on the Ministry of Health's regulations. If a passenger tests positive, he/she are allowed to go to a specified address, e.g., home or hotel, to a hospital if the case requires.



### **Passengers Departing from QAIA**

- Passengers need to check with the airlines for the regulations, requirements applied by the destination countries.
- Departing passengers who request the PCR test should be at the airport 4 hours before departure, to be able to test and receive the result, these tests are conducted at the departures curbside before entering to the terminal.
- Temperature scan is done for passengers before entering the check in area.
- For passengers with high temperature, the Ministry of Health protocol is followed before allowing the passenger to enter the check in area to complete their travel process.

### **Transfer Passengers**

- International transfer passengers are allowed at Jordanian airports as follows:
  - Negative PCR test is required within 72 hours prior to the scheduled time of departure from originating station.
  - The planned transfer time at QAIA not to exceed 10 hours.

### **Resources Deployed by the Airport**

- Specific areas allocated for laboratories, with electrical supply for 58 sampling booths.
- 40 specific trash bins for mask and gloves for all departing and arriving passengers.
- 60 automatic gel dispensers within the airport.
- Offices for testing machines.
- Specific toilets for laboratory staff.
- Specific rooms for passenger or airport staff isolation in case of suspicious cases.
- Thermal scanners at departing and arriving levels.
- Airport remote boarding lounge supplied if needed by the Ministry of Health to handle specific aircraft or passengers.
- Queue management system is also available at the arrivals immigration, used to manage queuing.
- Frontline staff available around the clock, some of which controlling physical distancing requirements and mask compliance.

### **Resources Deployed by the Public Health Authority**

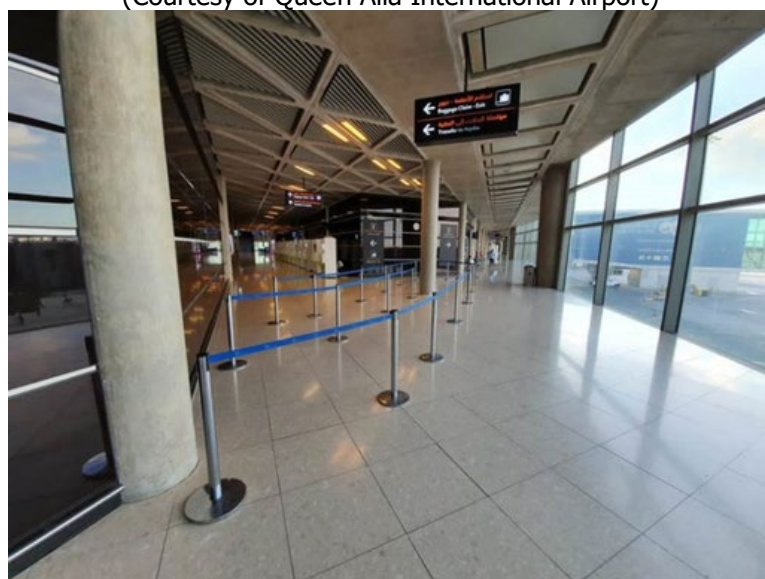
- Ministry of Health staff are responsible to operate the thermal scanners.
- Test labs deploy approximately 136 employees.
- Testing kit brands are Thermo Scientific PCR, Lab system, Tag Path, Hanon and Cosign.
- Testing capacity is between 1,500 and 1,700 tests per hour.



(Courtesy of Queen Alia International Airport)



(Courtesy of Queen Alia International Airport)



(Courtesy of Queen Alia International Airport)

## **ISTANBUL GRAND AIRPORT ISTANBUL, TURKEY**

Tests are performed and they are offered for:

- Departing passengers: Not mandatory for all departing passengers. Tests are performed if it is required by the country of destination or airline.
- Arriving passengers: There are no procedures applicable for arriving passengers. Testing is not performed for arriving passengers but offered to arriving passengers should they wish to do so.
- Transfer passengers: Antigen tests are performed for passengers from Netherlands, as required by the Government.

### COVID-19 test conducted

- Molecular test (PCR-Test) nasal or throat swab, Antigen test and Antibody test.
- Test centre is in the landside area on the arrivals floor. Passengers can also do the test in a laboratory approved by Ministry of Health located outside the airport.
- No appointment necessary. There are three different subcontracted company, accredited by the Ministry of Health, to perform the tests. Passengers can register at the test centre, wait in line at the chosen subcontracted company (maximum five minutes waiting time) and get tested.
- Registering procedure takes about three minutes and one minute to perform the test sample.

Passengers are not isolated while waiting, but they are not allowed to proceed with their journey unless they submit a negative test result. Negative test results must be first verified by the airline/ground handler at the check in. If a passenger with positive result has symptoms, he/she is transferred to the hospital. If there are no symptoms, passengers are transferred to a Quarantine Centre designated by the Ministry of Health, or to their own residency, for a 14-day quarantine, in coordination with Ministry of Health Emergency Services.

### Communication of test results to passengers

- Takes between one to three hours to get test results.
- Airport test centre provides the results.
- Passengers receive their results directly from the test centre.
- Passengers can receive their results via an e-nabiz account—a government portal for citizens to manage their health data— or as a printout from the test centre.

### Costs

Tests are paid for directly by the passenger:

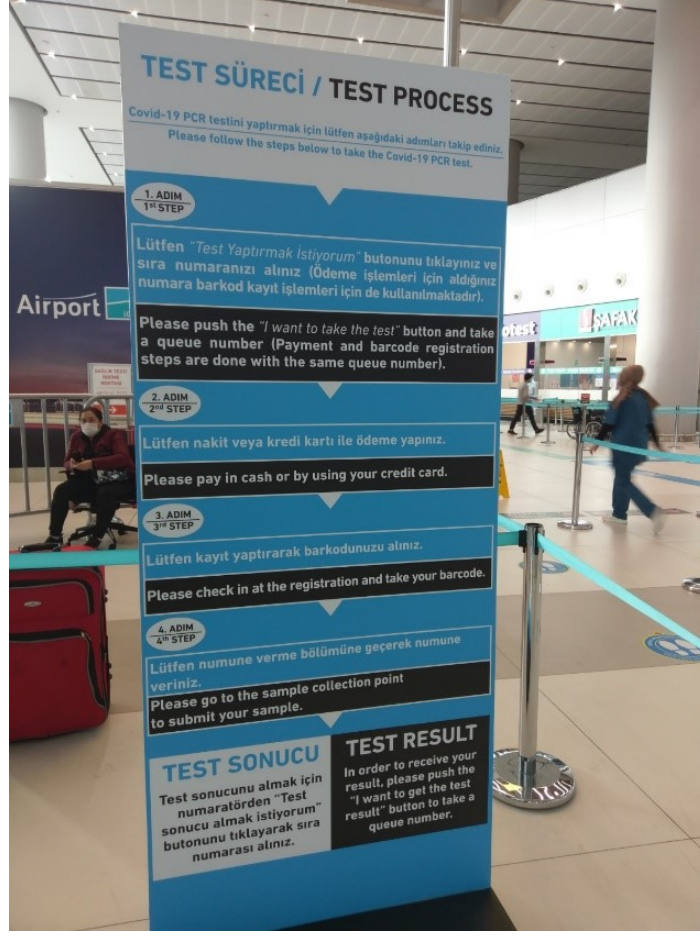
- Cost of the PCR test is 250 TL (approximately US\$ 35).
- Cost of the Antibody test is 300 TL (approximately US\$ 42).
- Cost of the Antigen test is 175 TL (approximately US\$ 25).

Laboratory services are performed by three different COVID-19 diagnostic laboratory which are accredited by the Ministry of Health. Management of operations related testing and Covid-19 related measures are responsibility of the airport.

### Testing kit brand

- There are three different companies using Bioeksen and Krosngen test brands which have been approved by the Ministry of Health.

The testing capacity is of 12,000 tests per day. Approximately, 2,000 tests are being performed in one day, but the airport can react quickly in case of demand increases.



(Courtesy of Istanbul Grand Airport)

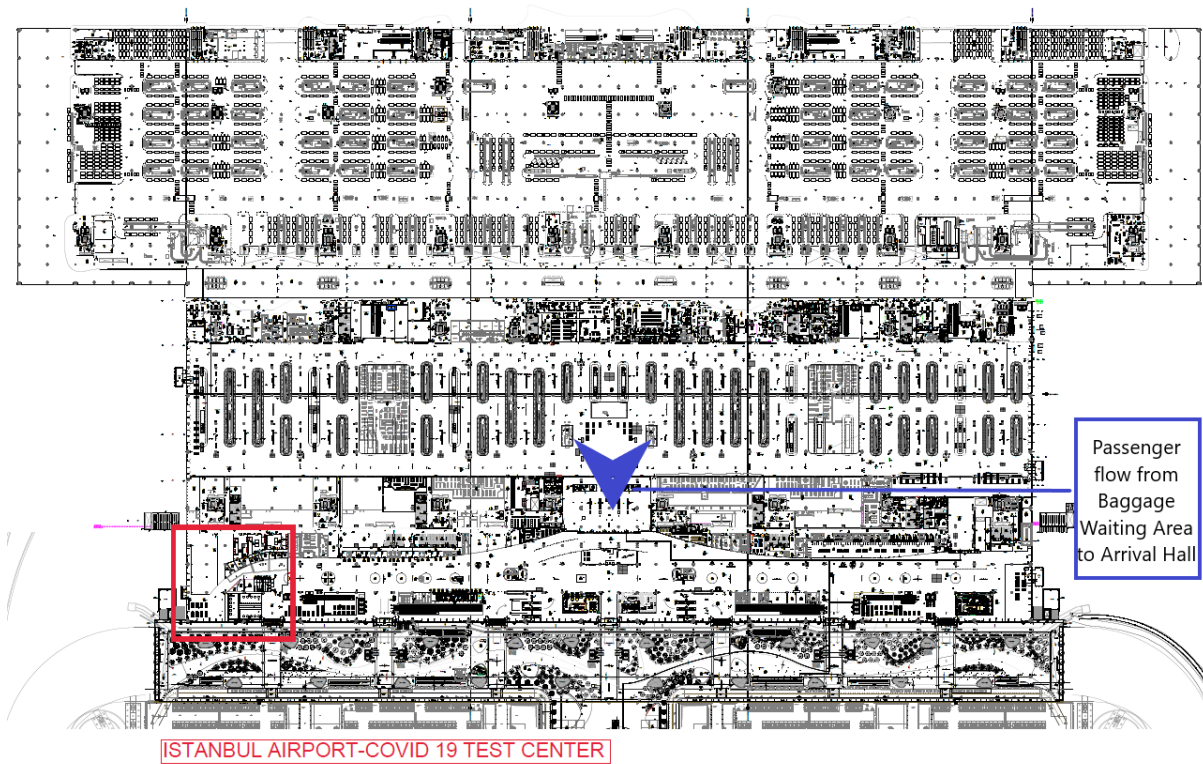


(Courtesy of Istanbul Grand Airport)

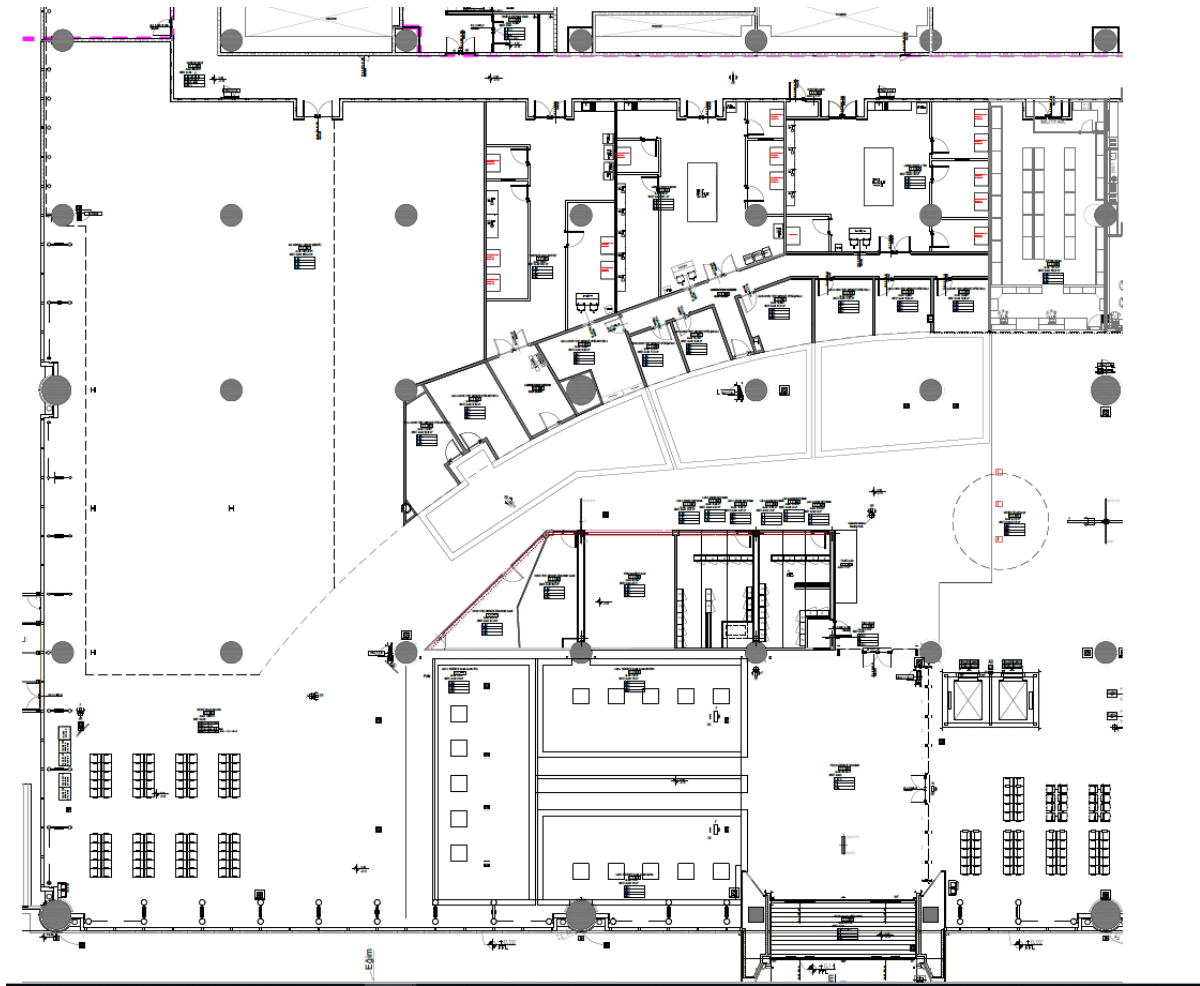




(Courtesy of Istanbul Grand Airport)



(Courtesy of Istanbul Grand Airport)



(Courtesy of Istanbul Grand Airport)

## **VANCOUVER INTERNATIONAL AIRPORT BRITISH COLUMBIA, CANADA**

The Vancouver International Airport has partnered with WestJet and the University of British Columbia to launch a pilot study, which offers departing passengers the option to voluntarily take antigen tests in advance of their flight. The goal of this initiative is to provide government with more health-related data associated with travel, increase overall passenger confidence in travelling through airports, and hopefully, demonstrate the feasibility of using a rapid point-of-care COVID-19 screening test as an effective layer of protection that can allow for an eventual safe restart to, and recovery of, air travel in Canada.

Located by WestJet's domestic check-in area, the study was officially launched on 27 November 2020 and includes three simple steps for passengers: i) test registration and informed consent, ii) test collecting, and iii) test result delivery. The study is open to WestJet guests who are residents of British Columbia, (Canada), between the ages of 19 and 80, and who have not tested positive for COVID-19 in the last 90 days. Study participants must be flying domestic, and testing is only available on the day of travel.

Both nasal pharyngeal swabs and saliva tests are performed on passengers to compare sensitivity and specificity of collected samples. The study's end-to-end process takes 35 minutes on average, with passenger registration averaging 15 minutes due to the review of informed consent and test sample collection and results taking up to 20 minutes to complete; researchers need to wait 15 minutes before results can be confirmed.

Research coordinators on site are all licensed medical professionals and are responsible for collecting samples from passengers; all samples are sent to a lab where a 2<sup>nd</sup> PCR test is carried out. All positive results need to be communicated to the relevant public health authorities, and as the carrier, Westjet is responsible for making any flight changes or rebooking as needed.

Supporting large-scale testing in terminal will be challenging, due to scalability and sustainability, so the airport is exploring alternative locations and processes if needed.

In January 2021, a representative from the airport authority mentioned that: *"It is a very good experience so far, 300 passengers have been tested with no positive test results. In addition to the rapid antigen test, they have been able to run all samples through a PCR test in the lab and have had no positive results there either, which is very promising. Feedback from passengers has largely been positive too."*



(Courtesy of Vancouver International Airport)



(Courtesy of Vancouver International Airport)



(Courtesy of Vancouver International Airport)



(Courtesy of Vancouver International Airport)



## **BRUSSELS AIRPORT BRUSSELS, BELGIUM**

Brussels Airport took the initiative to set up a COVID-19 Test Centre to further strengthen their sanitary measures at the airport, considering that testing is an essential element to allow the aviation industry, and the economy in general, to gradually recover without compromising the health and safety of the public.

The focus is on offering tests that are relevant and accepted in a travel context, and offering these tests in the fastest, most convenient way to their passengers and the general public, where requested by the authorities.

- Locations:
  - departure level, P11 (departing passenger testing)
  - arrival hall, bus station, P4 drive through (arriving passenger testing, currently (15/02) due to low volumes only arrival hall set up is active)
- Opening Hours 03:00 – 24:00, Mon-Sun
- Consists of parts:
  - Registration sampling area
  - Onsite lab (on departure level)

The COVID-19 Test Centre is operated by Ecolog, in partnership with Eurofins Labo Van Poucke.

Type of test: PCR test, international 'gold standard'

The Test Centre is set up in collaboration with partners that are in charge of both the lab and the medical staff and welcome management at the test centre itself.

For this purpose, Brussels Airport selected Ecolog, who subcontracted the accredited Eurofins lab Van Poucke for the aspects related to the lab and test analysis.

Standard format that gives passengers their results and certificates within 24h guaranteed (9h on average) and the fast track that provides results in 4h-6h. This is possible because the lab is onsite at the airport.

The COVID-19 Test Centre focuses primarily on offering PCR testing to:

- arriving passengers from 'red' zones, as defined by the Belgian Government, and
- departing passengers that require a negative PCR test result for their country of destination.

Brussels Airport is also looking at creating testing processes and solutions for the airport community and airline crew, and more specifically for transfer passengers (airside).

Information for passengers can be found on <https://www.brusselsairport.be/en/passengers/the-impact-of-the-coronavirus/covid-19-test-centre-at-brussels-airport>.



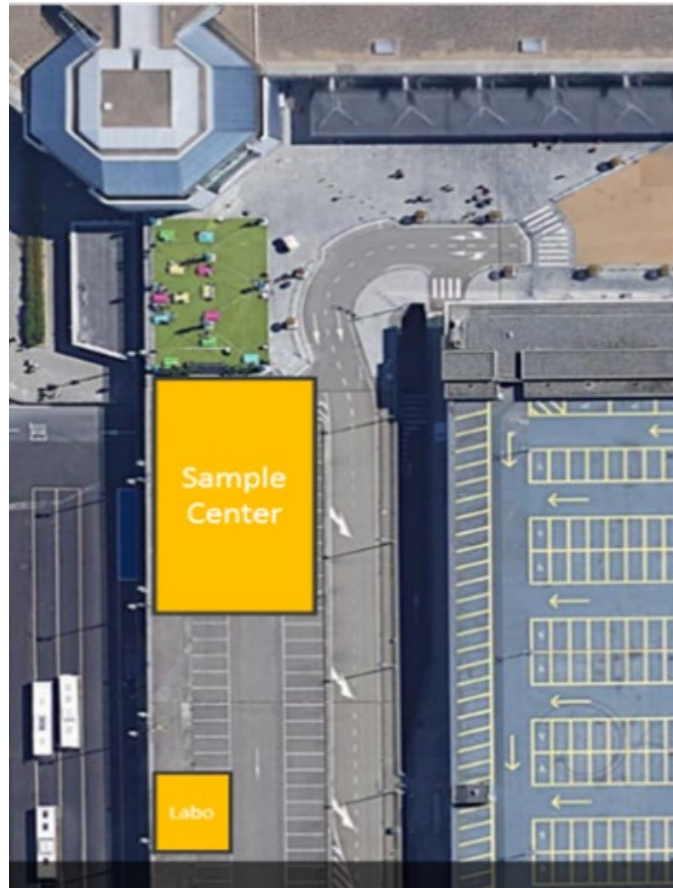
(Courtesy of Brussels Airport)



(Courtesy of Brussels Airport)



(Courtesy of Brussels Airport)



(Courtesy of Brussels Airport)



(Courtesy of Brussels Airport)

## Pricing

COVID-19 TEST WITH ACTIVATION CODE	MEMBER OF A BELGIAN HEALTH INSURANCE FUND €0 <i>Result within 48h.</i>	NOT MEMBER OF A BELGIAN HEALTH INSURANCE FUND €46,81 <i>Result within 48h.</i>
COVID-19 TEST WITHOUT ACTIVATION CODE • If you travel to a country that requires a negative test certificate	STANDARD TEST €67 <i>Result within 24h</i>	RAPID RESULT TEST €135 Usually within 4 to 6 hours (06:00 – 16:00)

## Capacity and Process numbers

Departing, max capacity 5500 tests/day

- November 2020: average 560 tests/day
- December 2020: average 1185 tests/day
- January 2021: average 823 tests/day
- Expecting lower volumes in February, March due to Belgian travel restrictions (back to November volumes or lower)
- On average 23% fast tests

Arriving, maximum capacity 8000 tests/day

- Scaled up due to changes to Belgian testing requirements from 31 December 2020
- January 2021: average 1125 tests/day
- Expecting lower volumes in February, March due to Belgian travel restrictions (average between 500-600 tests/day)

## 13 Vaccine Distribution – The Role of Airports

### Added Guidance as of March 2021

In the case where Covid-19 vaccines will enter a territory by air, airport operators have a key in the cargo logistics chain for the distribution of COVID-19 vaccines on a national and global level. In many cases, airports will be the nodes in this important distribution network that will be used for the entry or exit of vaccine shipments to countries and regions as a whole. Active participation of airports in this important phase of the recovery from the COVID-19 crisis is critical to the success of the global vaccine distribution programme.



Although airports are often not directly involved in the cargo operation itself, as this is generally managed among others by aircraft operators, freight forwarders, and ground handlers, the sensitive nature of this particular operation warrants a more significant involvement of the airport operator who can play a centrale role in ensuring an efficient, safe and secure operation on the airport site.

ACI has published an Advisory Bulletin on Airport Preparedness for Covid-19 Vaccine Distribution that aims at providing airport operators with some guidance on important aspects to consider around these specific operations. The bulletin puts forth operational, safety and security considerations airport operators should include in their planning or operational processes around these cargo operations. The details provided in that document have not been replicated here.

The success of the global vaccine distribution operations through airports will hinge upon the ability of airport operators and the overall cargo logistics chain to establish a plan for the operation, to execute the plan and adapt to new circumstances as they arise. There may also be some infrastructure changes or adaptations that are necessary to accommodate the cool-chain requirements for some of the vaccines that have been produced.

### 13.1 Planning

13.1.1 As with most operations on an airport, it is important to initiate planning activities early on and to include all the relevant stakeholders in the planning process. The plan will need to be based on information made available by local or national health authorities, such as frequency of shipments, dates and times of arrivals or departures, air carriers being used, storage requirements, etc. This information needs to be shared amongst the involved stakeholders so as to ensure a common situational awareness on the operation.

13.1.2 A good source of information on the planned operations will be the freight forwarders or air cargo operators, or possibly even their representatives who may be a ground handling service provider. The involvement of these organizations in the planning phase will be crucial as they will not only have some of the most recent and up-to-date information, but also will be directly involved in the operation itself.

13.1.3 Given the sensitive nature of the vaccines, in some cases there may be security protocols and requirements established by the national security authorities. The involvement of the security authorities in the planning process is equally important, so as to align expectations and operational plans.

13.1.4 Given the central role of the airport in the cargo logistics chain, the airport operator should act as a facilitator or coordinator for these operations, bringing together information and organizations in a coordinated effort to establish operational plans. This coordination role can be established through a dedicated task force, managed through the Airport Operations Coordination Centre (AOCC) or possibly even as part of the activities of the Emergency Operations Centre.

## 13.2 Operation

13.2.1 In most cases, airport operators are not directly responsible for the cargo operation taking place on the airport site. However, they do have a responsibility to ensure the efficiency, safety and security of airport operations as a whole. In this context, in the case where significant air cargo operations are planned as part of the vaccine distribution process, it is important that the airport operator stays involved in the overall coordination of the operation as these can impact the normal daily operations on the airport or there can be safety and security implications that may need to be managed.

13.2.2 In some cases, the vaccine shipments will arrive via belly freight or through small shipments on already established cargo operations. In these cases, the airport may have less of an involvement but should still be aware of the operation. This would be particularly important in the case where special security protocols are required by the security authorities.

## 13.3 Infrastructure

13.3.1 Some of the vaccines that have been produced require very specific temperature-controlled storage conditions with temperature requirements being as low as -70 C (-94 F), others can be stored in standard freezing conditions or even in refrigerated conditions. Facilities that provide these temperature requirements are not available at all airports, therefore requiring some changes to be made to existing facilities. In this case, airport operators should coordinate with the state agencies involved in the vaccine distribution process to identify the requirements and establish clear agreements on the financing of such facility upgrades. Given the national interest behind the provision of these infrastructures, the state may be in a position to finance them.

13.3.2 Additional adaptations to facilities may be necessary for security or accessibility purposes. Any requirements, such as these, should be identified in the planning phase through the engagement and coordination with all involved stakeholders.

## 13.4 Actions

13.4.1 In order to facilitate and ensure the successful deployment of vaccines on a global level, when the distribution process will involve air transportation, airport operators should:

- Take a role of coordination and facilitation in the planning and operational execution phases bringing together all affected stakeholders.
- Establish contacts and ensure close coordination with the cargo community at the airport.
- Be aware of the cargo operations taking place on the airport, particularly in the case where specific security protocols have been required.
- Liaise with national authorities on infrastructure and storage requirements.

## 14 ACI Resources

- 1 Airport Health Accreditation Programmes  
<https://aci.aero/about-aci/priorities/health/aci-airport-health-accreditation-programme/>
- 2 ACI Global Training  
<https://aci.aero/global-training/>
- 3 Webinar Series  
<https://store.aci.aero/webinars/>
- 4 Airport Excellence Programme in Safety and Security  
<https://aci.aero/apex/>

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# **APPENDIX**

## **AVIATION OPERATIONS DURING COVID-19 BUSINESS RESTART AND RECOVERY**

**MARCH 2021**

### **TABLE OF AMENDMENTS**

**This table of amendments includes changes made to Version 1 of this publication and appear highlighted in red.**



SECTION 1	Introduction
	<p><u>1.2 This second edition of the guidance document has been expanded to include information for airports planning to set up COVID-19 testing facilities, as well as information about the safe transport and distribution of vaccines. Existing material has also been reviewed and amended in accordance with new information.</u></p>
<p>This guidance document presents considerations in all aspects of airport management and operation to enable the restart and recovery of aviation operations while maintaining the confidence of staff and travellers. The objective of this guidance document is not to expect airports to use all the options provided, but rather give advice on implementation and best practice of measures that might be appropriate according to circumstance.</p>	<p><u>1.3</u> This guidance document presents considerations in all aspects of airport management and operation to enable the restart <u>and recovery</u> of aviation operations while maintaining the confidence of staff and travellers. The objective of this guidance document is not to expect airports to use all the options provided, but rather give advice on implementation and best practice of measures that might be appropriate according to circumstance.</p>
<ul style="list-style-type: none"> <li>• Initial restart with limited number of passengers</li> </ul>	<p><u>1.5</u></p> <ul style="list-style-type: none"> <li>• Initial restart with limited number of passengers, <u>mainly domestic travel</u></li> </ul>

SECTION 2	ACI WORLD GUIDANCE PRINCIPLES
	<u>Surveys have shown that there is considerable suppressed demand for air travel and tourism, but that quarantine is seen as the biggest single impediment to individual travellers.</u>
	<u>Air connectivity is essential to enable economic recovery. As States re-start international travel, we recognize that they need effective strategies for managing the risk of active case importation and disease transmission within the air transport system.</u>
	<u>Risk management strategies include transmission suppression and control, testing, and other tools such as symptom screening.</u>
	<p><u>2.1 COVID-19 Testing may reduce reliance on quarantine</u></p> <ul style="list-style-type: none"> <li><u>• COVID-19 testing could reduce reliance on quarantine, restriction of air services and movements of persons arriving in countries for essential business and tourism that are, for some States, dependent on inbound tourism for their economic sustainability.</u></li> <li><u>• Measures for health screening and/or testing should minimize interruptions to airport operations.</u></li> <li><u>• On-airport testing should be carefully planned to ensure that it does not result in the creation of crowds, queues and additional dwell time. This would be counterproductive in terms of physical distancing, and also create unnecessary concerns about the safety of the aviation system, unnecessary security risks, and possible safety hazards.</u></li> <li><u>• The ICAO Manual on Testing and Cross-border Risk Management Measures provides a significant step forward in helping States assess and manage risk so as to reduce requirements for quarantine, or even for testing, depending on their specific circumstances. Some of the key principles from this manual are highlighted below.</u></li> <li><u>• When addressing higher risk scenarios and applying testing as part of the multilayer risk management strategy, States should take into account the test result when considering the need for and duration of quarantine.</u></li> <li><u>• Testing should be performed by individuals trained to perform the test at a site approved by the appropriate authorities. The test outcome should be a confirmed test result that the traveller can present to authorities. This may be in digital or manual format, depending on the availability and acceptance of solutions.</u></li> <li><u>• One specific type of test is not recommended over another. The minimum values of 95% for sensitivity and specificity, however, will allow for a wider range of tests to be used that are currently available. This range also allows for the use of rapid antigen tests as a screening device which are more accessible and practical for application in the aviation environment; and are faster and cheaper to use. In addition, it would reserve the more expensive RT-PCR tests for use in clinical settings.</u></li> </ul>

	<p><u>2.2 A risk-management approach is needed</u></p> <ul style="list-style-type: none"> <li>• <u>All processes to be deployed to validate the acceptance of a passenger at departure or arrivals should be based on the medical evaluation of information and based on official medical expert evidence.</u></li> <li>• <u>All such measures should aim at limiting their potential impact on the overall passenger process.</u> <ul style="list-style-type: none"> <li>○ <u>For example, temperature screening has been shown to have limitations and may produce false positives and false negatives: The benefits should therefore be carefully weighed against the risk of creating uncertainty in the safety of the aviation system and additional bottlenecks in the passenger process.</u></li> </ul> </li> <li>• <u>Reducing risk to zero is impossible, but testing can be one measure in the risk management strategy. In implementing testing as a component of their overall COVID-19 risk management strategy, States should perform a risk assessment using epidemiologic criteria including but not limited to disease prevalence, disease trajectory, national testing strategy, screening capabilities, hospital capacity, and robustness of contact tracing.</u></li> <li>• <u>Faced with a fast-evolving pandemic, the risk assessment process must be regularly repeated. Measures should be adjusted depending on the results of the assessment. This may include adding or removing measures.</u></li> <li>• <u>States should share risk assessments with other States and harmonize their measures to the extent possible to help with public understanding, confidence and compliance with requirements.</u></li> </ul>
	<p><u>2.3 Quarantine requirements should be based on risk and local circumstance</u></p> <ul style="list-style-type: none"> <li>• <u>If States choose to implement quarantine measures for all passengers upon arrival, they should do so based upon a risk assessment and consideration of local circumstances. States choosing to implement a quarantine regime should do so after assessing all the implications, including non-health related effects, and considering them in accordance with their own national decision-making processes.</u></li> <li>• <u>On a careful analysis of the risks and evidence, as well as the government's risk tolerance, if the prevalence of infection at the point of origin of the passenger is less than (or equal to depending on risk tolerance) to the local prevalence at destination, and the passenger is not ill and/or has a negative test for COVID-19, governments might consider relaxing, reducing (possibly through a test to release protocol) or avoiding quarantine measures.</u></li> </ul>

## 2.7 Protective measures should be simple and practical

- Protective measures implemented at airports need to consider operational realities.
- Segregation of passengers, staff and/or crew may be possible in certain circumstances, where supported by existing infrastructure.
- Measures may include:
  - physical distancing. This may be possible in the short term but will depend on passenger volumes and terminal layouts. At the start of recovery, staggering the opening of kiosks, desks, bag drops and security lanes may be possible
  - additional cleaning and sanitization
  - wearing of PPE
  - limiting access to public areas
  - providing sanitization stations after each process point, and
  - encouraging health culture, implement staff training.

## 2.7 Protective measures should be simple and practical

- Protective measures implemented at airports need to consider operational realities.
  - [the ACI Airport Health Accreditation \(AHA\) programme supported by ICAO provides airports with an assessment of how aligned their health measures are with the ACI Aviation Business Restart and Recovery guidelines and ICAO Council Aviation Restart Task Force recommendations along with industry best practices \(https://aci.aero/about-aci/priorities/health/aci-airport-health-accreditation-programme/\)](https://aci.aero/about-aci/priorities/health/aci-airport-health-accreditation-programme/)
- Segregation of passengers, staff and/or crew may be possible in certain circumstances, where supported by existing infrastructure.
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  - physical distancing. This may be possible in the short term but will depend on passenger volumes and terminal layouts. At the start of recovery, staggering the opening of kiosks, desks, bag drops and security lanes may be possible
  - additional cleaning and sanitization
  - wearing of PPE
  - limiting access to public areas
  - providing sanitization stations after each process point, and
  - encouraging health culture, implement staff training.
    - [ACI provides several staff training courses related to COVID. \(https://www.olc.aero/product-category/covid-19/\)](https://www.olc.aero/product-category/covid-19/)

SECTION 3	Management and Planning for Restart
As such, it will be paramount to ensure that airport capacity recommissioning is in step with airline schedules and phased in an appropriate manner.	<b>3.3.2</b> As such, it will be paramount to ensure that airport capacity recommissioning is in step with airline schedules and phased <u>and communicated</u> in an appropriate manner.
<p><b>Capacity Recommendation #1: Airport operators should conduct a thorough analysis of their capacity.</b></p> <p>Capacity analyses should be conducted on a regular basis and updated whenever airport facilities and services are being recommissioned, when there are changes in the patterns of demand, or when new operational processes are being implemented.</p>	<p><b>Capacity Recommendation #1: Airport operators should conduct a thorough analysis of their <u>available</u> capacity</b></p> <p><b>3.3.3</b> Capacity analyses should be conducted on a regular basis and updated whenever airport facilities and services are being recommissioned, when there are changes in the patterns of demand, or when new operational processes <u>impacting capacity</u> are being implemented.</p>
As a first step of planning for restart, airport operators need to thoroughly analyse the impact of additional processes related to COVID-19 mitigation on available capacity. For terminal operations, the need to maintain physical distancing during initial phases of recovery may impact passenger throughput capacity, with a ripple effect on other systems, including aircraft parking stands and airfield operations.	<b>3.3.4</b> As a first step of planning for restart, airport operators need to thoroughly analyse the impact of additional processes related to COVID-19 mitigation on available capacity. For terminal operations, the need to maintain physical distancing during initial phases of recovery may impact passenger throughput capacity, with a ripple effect on other systems, including aircraft parking stands and airfield operations. <u>Experience has shown that the physical distancing requirements imposed by health regulations as well as the increased number of checks and document controls required at check-in or prior to boarding can have a significant impact in processing times.</u>
In order to understand the full impact of COVID-19 mitigation measures, cross- <del>departmental</del> input and consultation with relevant stakeholders involved in daily operations, such as aircraft operators and ground services, will be essential.	<b>3.3.6</b> In order to understand the full impact of COVID-19 mitigation measures, cross- <u>organisation</u> input and consultation with relevant stakeholders involved in daily operations, such as <u>air traffic control</u> , aircraft operators and ground services, will be essential.
The coordination parameters establishing the scheduling limits that can be coordinated or facilitated in a specified period should then be provided to the slot coordinator/facilitator.	<b>3.3.9</b> The coordination parameters establishing the scheduling <u>and capacity</u> limits that can be coordinated or facilitated in a specified period should then be provided to the slot coordinator/facilitator.
<b>Capacity Recommendation #3: Information sharing between airports and aircraft operators regarding operations during recovery</b>	<b>Capacity Recommendation #3: Information sharing between airports and aircraft operators regarding operation<u>al plans and capacity</u> during recovery</b>
To make timely decisions regarding the recommissioning of facilities and services, ongoing dialogue between airport operators and aircraft operators will be crucial. Receiving reliable flight schedules and thorough information on the aircraft operators' recovery plans <del>while</del> essential to ensure that the supply of airport capacity is aligned with airline demand.	<b>3.3.10</b> To make timely decisions regarding the recommissioning of facilities and services, ongoing dialogue between airport operators and aircraft operators will be crucial. Receiving reliable flight schedules and thorough information on the aircraft operators' recovery plans <u>will</u> be essential to ensure that the supply of airport capacity is aligned with airline demand.

<b>Restaurants and retail stores</b>  The sudden closure of terminal businesses could precipitate some tasks that were planned at later dates. Restaurants and stores gas and electrical supply could necessitate the need to be shutoff throughout the closure and inspected before returning to operation. The cleaning of restaurants grease traps also needs to be tended to, immediately following the decision of a lengthy closure in order to prevent eventual risks of clogging or fire.	<b>3.4.2 Restaurants and retail stores</b>  <b>3.4.2.1</b> The sudden closure of terminal businesses could precipitate some tasks that were planned at later dates. Restaurants and stores gas and electrical supply could necessitate the need to be shutoff throughout the closure and inspected before returning to operation. The cleaning of restaurants grease traps also needs to be tended to, immediately following the decision of a lengthy closure in order to prevent eventual risks of clogging or fire. <u>Adequate disposal of perishable goods should equally be tended to so as to avoid any mould or bacterial growth during the period of closure.</u>
HVAC systems are not conceived to remain shut down, and it is important to activate them on a regular basis during inspections to avoid unnecessary repairs and disruption during the restart.	<b>3.4.3 HVAC Systems</b>  <b>3.4.3.1</b> <u>Most</u> HVAC systems are not conceived to remain shut down, and it is important to activate them on a regular basis during inspections to avoid unnecessary repairs and disruption during the restart.
	<b>3.4.3.2</b> <u>In addition, some HVAC systems are often used to clear smoke should a fire occurs within the infrastructure. Care should be taken to mitigate this risk should the HVAC system be temporarily or permanently shut down.</u>
Inspection of such decommissioned equipment is essential before returning them to service for passenger use, based on manufacturers' recommendations National Building Codes.	<b>3.4.4.2</b> Inspection of such decommissioned equipment is essential before returning them to service for passenger use, based on manufacturers' recommendations <u>and applicable</u> National Building Codes.
Moreover, depending on the use of certain equipment such as escalators, either by the remaining passengers or employees, it is convenient to categorize them adequately. Maintenance protocols per category are to be defined and deployed, to make sure recommissioning goes smoothly. Thinking only of saving energy costs could be much more expensive if the minimum maintenance required is not performed.	<b>3.4.4.3</b> Moreover, depending on the use of certain equipment such as escalators, either by the remaining passengers or employees, it is convenient to categorize them adequately. Maintenance protocols per category are to be defined and deployed, to make sure recommissioning goes smoothly. Thinking only of saving energy costs could be much more expensive <u>in the longer run</u> if the minimum maintenance required is not performed.
Relationships with air carriers at an airport will be key, especially as their intentions may change rapidly. Liaison with contractors, unions, the air navigation service provider (ANSP) will also be important, as will issues of procurement of supplies, while the COVID-19 crisis continues.	<b>3.5.2</b> Relationships with air carriers at an airport will be key, especially as their intentions may change rapidly. Liaison with contractors, unions, the air navigation service provider (ANSP) <u>aircraft operators and ground handling service providers</u> will also be important, as will issues of procurement of supplies, while the COVID-19 crisis continues.
<del>Operational readiness assessment will also be a key topic. Lastly, for slot-controlled airports, capacity analysis and capacity declaration are also very important, as constraints and infrastructure closures are reduced.</del>	<b>3.5.3</b> <u>Slot-controlled airports should ensure</u> capacity analysis and capacity declaration <u>are conducted regularly, maintained current and communicated.</u>

<p>When planning to restart aircraft movements and passenger operations on the airport, <del>due to the COVID-19 crisis, much of the</del> airport infrastructure and systems may be shut down or have undergone partial, restricted or no use for a prolonged period of time. In addition, in many cases, airport and service provider staff will not have been involved in normal operations for an equally prolonged period.</p>	<p><b>3.5.4</b> When planning to restart <u>or increase significantly the</u> aircraft movements and passenger operations on the airport <u>it will be important to ensure adequate operational readiness and testing</u> of airport infrastructure and systems <u>that may have been</u> shut down or have undergone partial, restricted or no use for a prolonged period of time. In addition, in many cases, airport and service provider staff will not have been involved in normal operations for an equally prolonged period.</p>
<p>So as to adequately prepare for and manage this critical phase, airport operators should go through a thorough operational readiness assessment, similar to the process conducted when opening a new terminal, e.g., for all elements of the airport system that have not been engaged in standard operations for a prolonged period of time. This process should be conducted as part of the overall ramp-up and restart plan that should be established by the airport operator.</p>	<p><b>3.5.5</b> So as to adequately prepare for and manage this critical phase, airport operators should go through a thorough operational readiness assessment, similar to the process conducted when opening a new terminal, <u>in particular,</u> for all elements of the airport system that have not been engaged in standard operations for a prolonged period of time. This process should be conducted as part of the overall ramp-up and restart plan that should be established by the airport operator.</p>
<p><del>Airport operators should consider applying an operational assessment process to all aspects of the airport system prior to recommencing normal operations.</del> This assessment should be conducted on both infrastructures and systems (e.g., hold baggage sortation system, CUTE sets at check-in counters and gates, apron surfaces, runway lighting systems, potable water access points, etc.) that have not undergone normal operations for a period of time as well as on critical operational processes (e.g., rescue and firefighting (RFF), wildlife management, work site safety, etc.). All asset (infrastructure and systems) and process owners should be involved in the establishment of the testing check lists as well as participating in the field evaluation.</p>	<p><b>3.5.7</b> <u>The operational readiness</u> assessment should be conducted on both infrastructures and systems (e.g., hold baggage sortation system, CUTE sets at check-in counters and gates, apron surfaces, runway lighting systems, potable water access points, etc.) that have not undergone normal operations for a period of time as well as on critical operational processes (e.g., rescue and firefighting (RFF), wildlife management, work site safety, etc.). All asset (infrastructure and systems) and process owners should be involved in the establishment of the testing check lists as well as participating in the field evaluation.</p>
<p>Given the number of stakeholders operating at airports, it is important that the airport operators coordinate operational readiness testing processes with them to be sure to have the overall picture of the airport system prior to restart.</p>	<p><b>3.5.8</b> Given the number of stakeholders operating at airports, it is important that the airport operators coordinate <u>the overall</u> operational readiness testing processes <u>so as</u> to be sure to have the overall picture of the airport system prior to restart. <u>An overall asset and process readiness dashboard should be maintained and updated by the airport operator following each phase of ramp-down and ramp-up.</u></p>
	<p><b>3.5.9</b> <u>An equally important part of the operational readiness process will be to ensure that all operational staff are introduced back into the daily operations in such a way as to be fully ready to fulfil their tasks safely and according to established procedures or any new requirements that may have been developed. The airport operator should have a central role in consolidating a comprehensive understanding of the level of preparedness and competency of its own staff as well as that of all key stakeholders operating on the airport (ATC, ground handling, RFF, security, etc). See chapter 6 for further information on staff preparedness.</u></p>

SECTION 4	Safety and Operations
<p>The heavily reduced use of airside areas may have created gaps in the readiness of airside infrastructure, facilities, equipment and systems, which need to be restored to good condition. In addition, the staff providing airside services must be ready to resume operation, and re-trained if necessary.</p> <p>On the positive side, the <del>crisis</del> may present an opportunity to increase airport operational safety, both on the airfield (manoeuvring area) and on aprons. <del>If</del> a minimum time separation of movements <del>was</del> enacted with increased <del>physical</del> distance between aircraft, this may translate into reduced collision risk. Discussions with ATC may enable such operational procedures to be introduced. <del>Procedures could</del> also be introduced for <del>increased</del> inspections of the movement area to reduce foreign object <del>detection</del> (FOD), <del>wildlife and other hazards</del>. Ground handlers may also be allowed more time per turnaround, resulting in less pressure on safety, in discussion with aircraft operators.</p>	<p><b>4 SAFETY AND OPERATIONS</b></p> <p>The heavily reduced use of airside areas may have created gaps in the readiness of airside infrastructure, facilities, equipment and systems, which need to be restored to good condition <u>prior to ramp-up of operations following an operational readiness programme (see chapter 3)</u>. In addition, the staff providing airside services must be ready to resume operation, and re-trained if necessary. <u>See Chapter 6 hereto.</u></p> <p>On the positive side, the <u>reduction in number of movements</u> may present an opportunity to increase airport operational safety, both on the airfield (manoeuvring area) and on aprons. <u>For example, due to reduced movements</u> a minimum time separation of movements <u>can be</u> enacted with increased distance between aircraft, this may translate into reduced collision risk. Discussions with ATC may enable such operational procedures to be introduced. <u>Special operations may also be introduced for detailed inspections of the movement area to clean up and reduce foreign object debris (FOD)</u>. Ground handlers may also be allowed more time per turnaround, resulting in less pressure on safety, in discussion with aircraft operators.</p>
<p>To provide advice on mitigation, ACI has produced an Advisory Bulletin on <del>24 April 2020</del> titled “Mitigating the risks created by overflow aircraft parking”: <a href="https://aci.aero/wp-content/uploads/2020/04/200423-Airfield-Parking-Advisory-Bulletin-FINAL_001.pdf">https://aci.aero/wp-content/uploads/2020/04/200423-Airfield-Parking-Advisory-Bulletin-FINAL_001.pdf</a></p>	<p><u>4.1.2 To provide advice on mitigation, ACI produced an Advisory Bulletin on Mitigating the risks created by overflow aircraft parking: <a href="https://aci.aero/wp-content/uploads/2020/04/200423-Airfield-Parking-Advisory-Bulletin-FINAL_001.pdf">https://aci.aero/wp-content/uploads/2020/04/200423-Airfield-Parking-Advisory-Bulletin-FINAL_001.pdf</a></u></p>
<p><del>What to consider</del> before restarting operations:</p>	<p><u>4.1.4 Considerations</u> prior to restarting operations:</p>
<p><del>What to consider</del> after restarting operations:</p>	<p><u>4.1.5 Considerations</u> after restarting operations:</p>
<p>Recommissioning Aircraft <del>(in partnership with carriers)</del></p>	<p><u>4.2 Recommissioning Aircraft</u></p>
<p><del>The plan should focus on sequencing—</del> which parked aircraft will be worked on and when, and what type of tests and facilities they will need before being returned to service. The plan should be initiated by the aircraft’s operators (maintenance and flight operations) and coordinated with related stakeholders, including ATC and airport airside management. It should include an aircraft towing plan.</p>	<p><u>4.2.2 Airport operators should work with aircraft operators to identify the sequence and forecasts for re-entry into service of aircraft. This sequence should be developed into a plan focusing on</u> which parked aircraft will be worked on and when, and what type of tests and facilities they will need before being returned to service. The plan should be initiated by the aircraft’s operators (maintenance and flight operations) and coordinated with related stakeholders, including ATC and airport airside management <u>and the ground handling service providers</u>. It should include an aircraft towing plan.</p>



To complement the plan, it is recommended that airports issue a directive on aircraft returning to service after long term parking or storage.	<u>4.2.3</u> To complement the plan, it is recommended that airports issue <u>an operational directive or local procedure</u> on aircraft returning to service after long term parking or storage.
Airport staff may have been furloughed for short or longer periods of time. Consequently, skills can be reduced or even forgotten when staff return to work, despite previous qualifications. Also, some airports might hire staff on temporary contracts to have an agile and flexible set-up in terms of up- or downscaling of operations.	<u>4.4.1</u> Airport staff may have been furloughed for short or longer periods of time. Consequently, skills can be reduced or even forgotten when staff return to work, despite previous qualifications. Also, <u>in some cases airports and airport stakeholders</u> might hire staff on temporary contracts to have an agile and flexible set-up in terms of up- or down-scaling of operations.
Airports are advised to restart in a controlled environment, where the risk of safety incidents related to unpractised experience, <del>for example,</del> is reduced.	<u>4.4.2</u> <u>Airports are advised to restart in a controlled environment, where the risk of safety incidents related to unpractised experience is reduced.</u>
4.4.3 Assessment of retraining or recertification of staff is required, depending how long they have been away from the job is highly recommended. For staff training and during initial phases of recovery, use of online and virtual classrooms should be maximised when possible.	4.4.3 Assessment of retraining or recertification of staff is required, depending how long they have been away from the job is highly recommended. For staff training and during initial phases of recovery, use of online and virtual classrooms should be maximised when possible. <u>Did you know that ACI provides several training programmes that can assist with re-skilling staff? (<a href="https://aci.aero/global-training/">https://aci.aero/global-training/</a>)</u>
	<u>4.4.8</u> <u>Airports should coordinate with the wider community of airport stakeholders, including airlines and ground handling service providers, to ensure that a similar approach to bringing back temporary or long-term furloughed staff is applied for their employees.</u>
Airport operators and users' staff find themselves in an abnormal situation. Airports are advised to take human factors into consideration, since mental distractions can affect staff behaviour in various ways, for example:	<u>4.5.1</u> <u>Given the extraordinary conditions that the crisis have brought upon aviation and communities at large,</u> airports are advised to take human factors into consideration, since mental distractions can affect staff behaviour in various ways, for example:
Preparations for opening the aerodrome should be communicated at least one month prior to full operations. The following recommendations apply when resuming RFF operations after a full or partial shutdown. The plan should cover RFF activities for the protection level to be provided, including the items listed below.	<u>4.6.1.1</u> <u>In the case where an airport has ceased operations all together,</u> preparations for opening the aerodrome should be communicated <u>at the earliest possible time, ideally four weeks,</u> prior to full operations. The following recommendations apply when resuming RFF operations after a full or partial shutdown. <u>Operators should establish an operational resumption plan that</u> should cover RFF activities for the protection level to be provided, including the items listed below.
ICAO Annex 14 and ICAO Doc 9137, Part 1 require that the level of protection must be commensurate with the fuselage length and size, and frequency of aircraft operating to the aerodrome, which leads to determination of the RFF Category and the number of vehicles required for that category. Notification of any change in Category should be communicated to ATC.	<u>4.6.1.2</u> ICAO Annex 14 and ICAO Doc 9137, Part 1 require that the level of protection must be commensurate with the fuselage length and size, and frequency of aircraft operating to the aerodrome, which leads to determination of the RFF Category and the number of vehicles required for that category. Notification of any change in Category should be communicated to ATC <u>and pilots operating into the aerodrome by NOTAM.</u>
On returning to work, all staff should be briefed on the activities to be performed with regard to RFF Category as well as their responsibility and operational hours. Staff who were asked to stay off duty should undergo validation of their skills and competence.	<u>4.6.2.1</u> On returning to work, all staff should be briefed on the activities to be performed with regard to RFF Category as well as their responsibility and operational hours. Staff who were asked to stay off duty should undergo validation of their skills and competence. <u>Briefings</u>

	<u>should include any changes to normal operating procedures related to COVID-19 protection measures, including elements such as the use of PPE or disinfection protocols for vehicles.</u>
All RFF personal protective equipment should be inspected and cleaned prior to use.	<u>4.6.2.2</u> All RFF personal protective equipment should be inspected and <u>if necessary</u> , cleaned prior to use.
Where areas of an airport have been unused, inspections should be carried out, including: <ul style="list-style-type: none"> <li>• . . .</li> <li>• Inspection of water hydrants and supply systems, including pressure flow test</li> </ul>	<u>4.8.1</u> Where areas of an airport have been unused, inspections should be carried out, including: <ul style="list-style-type: none"> <li>• Inspection of water hydrants and supply systems, including pressure flow test, and</li> <li>• <u>Aerodrome lighting and signage</u></li> </ul>
	<u>4.8.2</u> <u>Airport operators may take advantage of the reduction in activity on the airport to conduct specific inspections and cleaning activities of airside areas that can be rendered more complex in normal operating conditions.</u>
<del>Daily operations at airports have been dramatically reduced and some airports have even closed down temporarily. This</del> may lead to increased presence of wildlife on and around the airport and increased risk of wildlife related incidents.	<u>4.9.1</u> The <u>reduction or suspension of operations</u> may lead to increased presence of wildlife on and around the airport and <u>an</u> increased risk of wildlife related incidents.
Measures taken during the crisis should be continued as possible and as long as needed. These may include:	<u>4.10.1</u> <u>Health</u> measures should be continued as possible and as long as needed. These may include:
<b>4.11 Ground Handling <del>on Apron Areas</del></b>	<u>4.11</u> <b>Ground Handling Operations</b>
	<u>4.11.1</u> <u>Airport operators should work collaboratively with Ground Handling Service Providers to ensure the safety of operations on the airport, in particular during periods of low activity and ramp-up. Close coordination between the airport and ground handlers is required to ensure a common situational awareness is established for all, especially as related to the operational planning of activities and return of staff to operations.</u>
See section <del>on Aprons above</del> and <del>also</del> refer to International Air Transport Association (IATA) guidance at <a href="https://www.iata.org/en/programs/ops-infra/ground-operations/">https://www.iata.org/en/programs/ops-infra/ground-operations/</a> .	<u>4.11.2</u> See <u>previous sections of this chapter for further guidance</u> and refer to International Air Transport Association (IATA) guidance <u>available</u> at <a href="https://www.iata.org/en/programs/ops-infra/ground-operations/">https://www.iata.org/en/programs/ops-infra/ground-operations/</a> .

SECTION 5	Airport Operations Control Centre (AOCC)
<p>If an airport does not have an AOCC in place, the creation of a centralized coordinating unit for managing recovery is recommended, with clearly defined communication channels and responsibilities as described below.</p>	<p><u>5.1.2</u> If an airport does not have an AOCC in place, the creation of a centralized <u>ad-hoc</u> coordinating unit for managing recovery is recommended, with clearly defined communication channels and responsibilities as <u>outlined</u> below.</p>
<p><b>5.2 Secondary Location of the AOCC</b></p> <p><del>Other considerations:</del></p> <ul style="list-style-type: none"> <li>Split the AOCC team's and functions between the primary and backup location. Measures to prevent cross-contamination between the primary and backup location should be in place.</li> <li>Backup AOCC should be active prior evacuating the primary AOCC.</li> <li>Establishing a second backup location in the event that the first backup option is not accessible or available.</li> </ul>	<p><b>MOVED TO</b></p> <p><u>5.8</u> Secondary Location of the AOCC</p> <p><u>5.8.3</u> <u>In the case when a backup is available, consideration should be given to:</u></p> <ul style="list-style-type: none"> <li><u>Splitting</u> the AOCC team's and functions between the primary and backup location. Measures to prevent cross-contamination between the primary and backup location should be in place.</li> <li><u>Ensuring that the</u> backup AOCC should be active prior evacuating the primary AOCC.</li> <li>Establishing a second backup location in the event that the first backup option is not accessible or available.</li> </ul>
<p><b>5.4 Stakeholders' Responsibilities</b></p> <p><b>Aircraft operators:</b> . . .</p> <p><b>Ground handlers:</b> Should notify the AOCC of any capacity limitations to handle aircraft turnaround.</p> <p>. . .</p>	<p><b>MOVED TO</b></p> <p><u>5.3 Coordination and communication</u></p> <p><u>5.3.1</u> <u>The AOCC has a crucial role in consolidating the information available from all relevant sources and disseminating it back out to the airport community. In the context of this particular situation, stakeholders that are part of a structured AOCC or an ad-hoc coordination cell should take on the following roles and responsibilities.</u></p> <p><b><u>AOCC</u></b>  <u>Communicate all new/updated processes that could impact any stakeholder in a timely manner. This should consider decisions from higher authorities (government, operators, executive level, etc.).</u></p> <p><b>Ground handlers:</b> Should notify the AOCC of any capacity limitations <u>(staff or equipment)</u> to handle aircraft turnaround.</p> <p>. . .</p>

<p><b>5.5 <del>New Requirements and AOCC (parking assignment)</del></b></p> <p>In the <del>business</del> recovery phase, the traffic patterns and characteristics <del>might change</del> dramatically over the seasonal schedule and short notice variations need to be expected on a daily basis. This <del>may result</del> in more manual updates and, therefore, a greater risk of errors in flight data management and resource allocation. Special procedures to be applied for <del>certain</del> flights <del>related to</del> local restrictions and rules applicable for particular destinations <del>might</del> significantly constrain the flexibility and capacity in resource assignment.</p>	<p><b>5.4 <u>Managing the impact of health requirements</u></b></p> <p><b>5.4.1</b> In the recovery phase, the traffic patterns and characteristics <u>have</u> changed dramatically over the seasonal schedule and short notice variations need to be expected on a daily basis. This <u>has resulted</u> in more manual updates and, therefore, a greater risk of errors in flight data management and resource allocation.</p>
	<p><b>5.4.2 <u>The increasing number of restrictions implemented by each state and the</u></b> special procedures to be applied for flights <u>to and from these destinations as well</u> as local restrictions and rules applicable for particular destinations <u>can</u> significantly constrain the flexibility and capacity in resource assignment.</p>
<p>The following scenarios should be considered:</p> <ul style="list-style-type: none"> <li>• Unusual traffic patterns as many ad hoc flights complement regular services or will in an unusual way even feed scheduled services.</li> <li>• Private, government aircraft, executive jets, <del>will</del> feed long haul scheduled flights, which might require that general aviation flights need to be accommodated on the main commercial airport instead of a nearby general aviation reliever airport to facilitate transfer in times when multiple immigration restrictions still apply.</li> <li>• At some hub airports, those charter flights will connect with scheduled services. Often special arrangements need to be made in order to facilitate the transfer from charter to scheduled services, which entails that certain operators or types of traffic might need to be allocated to other terminals than usual or in some instances require even tail-to-tail transport of passengers to be arranged.</li> <li>• Special approvals from State authorities need to be obtained in due time.</li> <li>• Special pre-departure measures.</li> <li>• Special arrival measures, if an incoming flight is suspected not compliant with your government measures.</li> <li>• Identify where new technology/equipment (such as thermal screening, testing, PPE, etc. required by other States) might be supplied or where certain arrangements for storage and dispensation of PPE can be made or where other special procedures can be performed.</li> <li>• The instability of the schedule <del>most likely needs to be</del> expected to persist <del>over the remainder of the entire flight schedule season or even beyond</del> as travel restrictions in effect in many countries will only gradually be relaxed</li> </ul>	<p><b>5.4.2</b> The following scenarios should be considered <u>by the AOCC or crisis management cell</u>:</p> <ul style="list-style-type: none"> <li>• Unusual traffic patterns as many ad hoc flights complement regular services or will in an unusual way even feed scheduled services.</li> <li>• Private, government aircraft, executive jets, <u>feeding</u> long haul scheduled flights, which might require that general aviation flights need to be accommodated on the main commercial airport instead of a nearby general aviation reliever airport to facilitate transfer in times when multiple immigration restrictions still apply.</li> <li>• At some hub airports, those charter flights will connect with scheduled services. Often special arrangements need to be made in order to facilitate the transfer from charter to scheduled services, which entails that certain operators or types of traffic might need to be allocated to other terminals than usual or in some instances require even tail-to-tail transport of passengers to be arranged.</li> <li>• Special approvals from State authorities need to be obtained in due time.</li> <li>• Special pre-departure measures.</li> <li>• Special arrival measures, if an incoming flight is suspected not compliant with your government measures.</li> <li>• Identify where new technology/equipment (such as thermal screening, testing, PPE, etc. required by other States) might be supplied or where certain arrangements for storage and dispensation of PPE can be made or where other special procedures can be performed.</li> <li>• The instability of the schedule <u>is</u> expected to persist <u>still for a number of months</u> as travel restrictions in effect in many countries will only gradually be relaxed and the business life in many countries will only gradually recover which makes it very difficult for aircraft operators to predict demand.</li> <li>• Airline bankruptcy and/or or fleet size and network reductions.</li> </ul>

<p>and the business life in many countries will only gradually recover which makes it very difficult for aircraft operators to predict demand.</p> <ul style="list-style-type: none"> <li>• Airline bankruptcy and/or or fleet size and network reductions.</li> <li>• Very instable schedules and a many of ad hoc changes such as one-off charters, cancellations, service reinstatements, aircraft type and rotation changes, and even schedule changes. -Special hygiene and disinfection procedures will require extended ground times of aircraft that are arriving from high-risk countries which might affect schedules or result in aircraft changes.</li> <li>• Special hygiene and disinfection procedures will require extended ground times of aircraft that are arriving from high-risk countries which might affect schedules or result in aircraft changes.</li> <li>• <del>Unusual traffic patterns as many ad hoc flights complement regular services or will in an unusual way even feed scheduled services.</del></li> <li>• Aircraft of home-based carriers that are stored on other airports are repositioned to their base airport where they undergo extensive maintenance prior to re-entry into service and need to be accommodated along operational and stored aircraft.</li> <li>• Many towing movements need to be coordinated by AOCC as required to unlock return into service operational aircraft that are locked—in by aircraft that are still in long term storage and in order to facilitate various maintenance activities including engine runs as required before an aircraft may return to service.</li> <li>• Ensure that resource allocation rules in Resource Management IT systems are being reinstated after they have been temporarily overridden or deactivated to accommodate stored aircraft in denser non-standard parking configurations.</li> <li>• Adjacency restrictions, e.g., wing-tip clearances of temporary contingency parking stands with regular parking stands need to be observed.</li> <li>• Additional stand and gate allocation rules might need to be generated in the database of the Resource Management tool in order to reflect new public health related requirements as physical distancing or segregation of passengers or other measures as thermal scanning. Examples are certain destinations or origins only to be accommodated at specifically equipped gates or certain aircraft to be exempted from certain gates as the hold room capacity may not be adequate in accordance to new physical distancing standards, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Very instable schedules and a many of ad hoc changes such as one-off charters, cancellations, service reinstatements, aircraft type and rotation changes, and even schedule changes.</li> <li>• Special hygiene and disinfection procedures will require extended ground times of aircraft that are arriving from high-risk countries which might affect schedules or result in aircraft changes.</li> <li>• Aircraft of home-based carriers that are stored on other airports are repositioned to their base airport where they undergo extensive maintenance prior to re-entry into service and need to be accommodated along operational and stored aircraft.</li> <li>• Many towing movements need to be coordinated by AOCC as required to unlock return into service operational aircraft that are locked—in by aircraft that are still in long term storage and in order to facilitate various maintenance activities including engine runs as required before an aircraft may return to service.</li> <li>• Ensure that resource allocation rules in Resource Management IT systems are being reinstated after they have been temporarily overridden or deactivated to accommodate stored aircraft in denser non-standard parking configurations.</li> <li>• Adjacency restrictions, e.g., wing-tip clearances of temporary contingency parking stands with regular parking stands need to be observed.</li> <li>• Additional stand and gate allocation rules might need to be generated in the database of the Resource Management tool in order to reflect new public health related requirements as physical distancing or segregation of passengers or other measures as thermal scanning. Examples are certain destinations or origins only to be accommodated at specifically equipped gates or certain aircraft to be exempted from certain gates as the hold room capacity may not be adequate in accordance to new physical distancing standards, etc.</li> </ul>
<p><del>For an AOCC, this means an increase of manual effort of flight schedule updates which might result in a higher probability of errors and increased manpower requirements, as well as an increased need for coordination.</del></p>	

<p>Additional constraints such as immigration procedures might not allow for certain passengers to enter the country, thereby limiting access to a hotel outside of the terminal building. The AOCC <del>might need to</del> advise concerned parties (Terminal Operations, Airport Duty Manager, Immigration, Welfare Services, etc.) on the presence of stranded passengers in order for the airport, in collaboration with the aircraft operator, to either facilitate exceptional restrictions from immigration rules or to ensure that passengers will be appropriately treated in the transit area. For example, certain locations equipped with foldable cots or in areas where food can be supplied as even F&amp;B outlets at the airport may still be closed or only be in limited operation.</p>	<p><u>5.5.2</u> Additional constraints such as immigration procedures might not allow for certain passengers to enter the country, thereby limiting access to a hotel outside of the terminal building. The AOCC <u>should</u> advise concerned parties (Terminal Operations, Airport Duty Manager, Immigration, <u>Ground Handling Service Provider, Airline</u>, Welfare Services, etc.) on the presence of stranded passengers in order for the airport, in collaboration with the aircraft operator, to either facilitate exceptional restrictions from immigration rules or to ensure that passengers will be appropriately treated in the transit area. For example, certain locations equipped with foldable cots or in areas where food can be supplied as even F&amp;B outlets at the airport may still be closed or only be in limited operation.</p>
<p><b>5.7.1 Reduce staff contact</b></p> <ul style="list-style-type: none"> <li>• activate backup centre to spread out the workforce;</li> </ul>	<p><u>5.6.1</u> Reduce staff contact</p> <ul style="list-style-type: none"> <li>• <u>when available</u>, activate backup centre to spread out the workforce;</li> </ul>
<p><b>5.7.2 <del>Working from home</del> for the AOCC</b></p> <p>Depending on regulations and restrictions of the AOCC, working <del>from home</del> arrangements for some duties or tasks could be considered, such as:</p>	<p><u>5.6.2 Remote working for the AOCC</u></p> <p>Depending on regulations and restrictions of the AOCC <u>as well as the possibility for IT systems to be operated remotely, remote</u> working arrangements for some duties or tasks could be considered, such as:</p>
<p><b>5.8 Emergency Operations Centre (EOC)</b></p> <p>If the EOC will be activated (although maybe in an alternate location), this should be communicated to the stakeholders. The special protective measures related to the pandemic crisis should also be applied to the EOC.</p>	<p><u>5.7</u> Emergency Operations Centre (EOC)</p> <p><u>5.7.3</u> If the EOC will be activated (although maybe in an alternate location), this should be communicated to the stakeholders. The special protective measures related to the pandemic crisis should also be applied to the EOC. <u>Consideration to a remote EOC, using web-based solutions, should also be studied.</u></p>

SECTION 6	Employees and Human Resources
	<p><u>6.2.3</u> Given the prolonged nature of the event and the uncertainty that many employees are confronted with around staff reductions or long-term furlough programmes consideration should be given to providing psychological support through means such as telephone helplines or staff peer briefings and support groups. It is important that personnel feel adequately psychologically accompanied during this phase.</p>
Airports and stakeholders' leaders must pay particular attention to employees that are vulnerable (+65 years old). <del>Until a vaccine is available,</del> interaction with older generations may be severely restricted or perceived as high risk.	<p><u>6.3.4</u> Airports and stakeholders' leaders must pay particular attention to employees that are vulnerable (+65 years old). Interaction with older generations may be severely restricted or perceived as high risk.</p>
	<p><u>6.4 Operational staff</u></p> <p><u>6.4.1</u> Many staff on airports have operational roles with shift patterns tied to levels of production and activities. With the significant reduction in activities, many staff have been temporarily furloughed or are working reduced shifts. Some have not been engaged in operations for weeks or possibly months. In addition, the new health security requirements can have an impact on the performance of their individual duties (disinfection procedures, distancing, etc.) as well as the standard operating procedures staff are accustomed to apply (security protocols, boarding, etc.).</p> <p><u>6.4.2</u> Particular attention needs to be given to accompanying the return to operations for staff in these types of functions, in particular as regards training and competency checks so as to be sure that they can perform their duties according to established or new standards and criteria. See section 4.4 for further information related to the return to operation of staff.</p> <p><u>6.4.3</u> In some cases, in order to maintain competency or a specific license, staff have to undergo regular training and checks. Individuals who are absent for prolonged periods of time may not be able to complete the adequate training and checks requirements therefore losing their licenses or operating permissions. Particular care should be taken to ensuring that all staff returning to operations have undergone adequate training and are competent to perform their duties.</p> <p><u>6.4.4</u> For any staff who has been absent for a prolonged period of time, the return to operations may be daunting in particular for those directly confronted with the traveling public. Measures to accompany this return to operations should be considered, such as pre-shift staff briefings and post-shift staff de-briefings, rostering shorter shifts or pairing less experienced employees with more experienced ones. The presence of management teams will also be useful to accompany the return to operations. Did you know ACI provides several</p>

	training programmes that can assist with the re-skilling staff? ( <a href="https://aci.aero/global-training/">https://aci.aero/global-training/</a> )
<p>6.6—Actions:</p> <ul style="list-style-type: none"> <li>• <del>Help employees stay safe and champion wellness.</del></li> <li>• <del>Provide employees with the resources and support they need to be effective.</del></li> <li>• <del>Build resiliency in the face of the new normal and communicate effectively.</del></li> </ul>	Deleted



SECTION 7	Health
<p>7.4 Measures to Implement Health Screening or Monitoring at Airports</p> <p>...</p> <p>If health screening is required by local authorities, or is the preferred option of an airport, a variety of options are available. These are generally designed to prevent symptomatic passengers from traveling and, therefore, further spreading the virus to staff and other passengers.</p> <p><b>7.4.6 Health Declaration / Health Passport</b></p> <p>Some governments are implementing a Health Declaration solution that can be integrated with the existing processes, such as national databases, electronic visa or travel authorization applications prior to departing flights. The same forms can also be included in mobile applications, thereby eliminating the need for expensive touch-based equipment such as kiosks. Touchless Health Declarations can also be integrated into immigration kiosks at arrival airports or through more traditional paper forms handed for passengers to fill in prior to arrival (paper transactions should however be avoided when possible). The information that will need to be ascertained includes details about a passenger's health in the 14 days prior to travel, any symptoms shown and countries or areas they have visited. This may help officials evaluate each passenger and whether they will need to be referred to secondary assessment.</p>	<p>7.4 Measures to Implement Health Screening or Monitoring at Airports</p> <p><u>7.4.3</u> If health screening is required by local authorities, or is the preferred option of an airport, a variety of options are available. These are generally designed to prevent symptomatic passengers from traveling and, therefore, further spreading the virus to staff and other passengers. <u>For example, when addressing higher risk scenarios and applying testing as part of a multilayer risk management strategy, countries may require passengers to be tested for COVID-19 prior to arrival to their country. Various testing implementation models have been trialed in airports around the world and readers are invited to refer to Section 12 COVID-19 Testing Facilities at Airports for additional details.</u></p> <p><u>7.4.11</u> <b>Health Declaration / Health Passport</b></p> <p>Some governments are implementing a Health Declaration solution that can be integrated with the existing processes, such as national databases, electronic visa or travel authorization applications prior to departing flights. The same forms can also be included in mobile applications, thereby eliminating the need for expensive touch-based equipment such as kiosks. Touchless Health Declarations can also be integrated into immigration kiosks at arrival airports or through more traditional paper forms handed for passengers to fill in prior to arrival (paper transactions should however be avoided when possible). The information that will need to be ascertained includes details about a passenger's health in the 14 days prior to travel, any symptoms shown, <u>result of a COVID-19 test</u>, and countries or areas they have visited. This may help officials evaluate each passenger and whether they will need to be referred to secondary assessment.</p>

SECTION 8	Security
<p>Further information on how to evaluate capacity, understand impacts through simulation and other physical modifications to checkpoints can be found in the ACI Europe's Off the Ground Working Paper under Chapter IX – Phase 1 Limited Operations.<sup>2</sup></p>	<p><u>8.5.2</u> Further information on how to evaluate capacity, understand impacts through simulation and other physical modifications to checkpoints can be found in the ACI Europe's Off the Ground Working Paper under Chapter IX – Phase 1 Limited Operations.<sup>2</sup> <u>Users can also access the ACI Security Checkpoint Modelling videos provided by ACI World on the ACI World website.</u><sup>3</sup></p> <p><sup>3</sup>ACI Security Checkpoint Modelling - <a href="https://store.aci.aero/form/security-checkpoint-modelling/">https://store.aci.aero/form/security-checkpoint-modelling/</a></p>

## SECTION 9

According to governmental authorities, the recovery is likely to start first with an increase in domestic travel followed by international flights. This situation will accelerate the recovery of two regions—North America and Asia-Pacific—where the proportion of domestic traffic was higher than other regions.

	Africa	Asia Pacific	Europe	Middle East	North America	Latin America/ Caribbean
Domestic	49.5%	74.3%	30.0%	18.3%	80.6%	40.7%
International/ Transborder	50.5%	25.7%	70.0%	81.7%	19.4%	59.3%

Source: ACI Airport Service Quality Departures, 2019

While redesigning the passenger experience, efforts should be made according to the passengers' profiles. During the recovery phase, it is expected to have more business than leisure travelers. While this target is not the most significant in terms of number of passengers (22.6% of travelers in 2019 according to ASQ data), they remain highly important since:

- they are the most frequent flyers (55.6% travelled 6+ times in the past 12 months, compared to 24.3% for leisure travelers); and
- 63.7% of business travelers are traveling domestically.

Therefore, their experience must be adapted in order to be efficient without compromising their safety. Africa is the region with the highest proportion of business travelers (36%), followed by North America (27.6%).

According to ASQ data, passengers over 65 years (who are more vulnerable to the virus) represent only 7.1% of travelers in 2019, and they are among passengers that travel less frequently.

## Airport Experience Management

9.2.2 According to the ASQ 2020 Global Traveller Survey<sup>4</sup>, 48% of the respondents who travelled in 2019 mentioned that they were likely to travel by air again within the next three months. Although intention does not always translate into behaviour, these results demonstrate travellers' desire to start travelling again quickly. The speed of the recovery will not be the same for each region. Travellers from Africa, Middle East, North America and Europe are more likely to resume their travel activities sooner than travellers from Asia-Pacific and Latin America/ Caribbean.

<sup>4</sup> ASQ 2020 Global Traveller Survey, COVID-19: Understanding Future Behaviours for a Successful Recovery, September 2020, online survey conducted among 4,100 respondents from 30 countries.

9.2.3 Besides the geographical factor, several other elements such as reason to travel, level of confidence in airports' environment and travellers' concerns about the crisis will influence how fast they will start travelling by air again:

- Segments travelling by obligation, whether it is for business or personal reasons, will return faster. Indeed, 59% of business travellers intend to travel within the next three months, with a higher proportion of domestic trips. Of respondents who will be travelling mainly for personal reasons, slightly more than half (54%) want to travel within the next few months. The distribution between domestic and international traffic is almost equal. Travellers who fly on vacations are more likely to wait before travelling again. This segment of passengers will not avoid airports within the next few months, but it is more likely to see them wait before resuming their habits.
- The eagerness to travel again can also be attributed to a strong level of confidence in airports and airlines, as 80% of travellers are confident that the two entities will provide a safe environment.
- Several uncontrollable variables can be perceived as limits to travel such as initiatives that authorities might have to put in place to limit the spread of the virus and the evolution of the crisis itself. One of the main obstacles to future travelling is the need for quarantine either at their destination or on return. Indeed, 76% of respondents said that they would not travel if they needed to put themselves in quarantine. This result reinforces the fact that quarantine is a major hurdle for the industry's recovery. While this barrier will have an impact on the intention to travel for all regions, it is even more of a constraint for travellers from North America, Asia Pacific and Europe.

<p><b>9.3 New Set of Expectations, New Measures</b></p> <p><del>Whether passengers expect sanitation measures, contactless journeys, physical distance with other travelers or clear instructions on how to stay safe, the implementation of measures to meet those needs can be done in various ways.</del></p> <p><del>The main objective is to ensure passengers' safety, but also, it</del> serves as important visual cues to reassure the passengers. Therefore, it is critical to not only have the right measures in place, but also to deliver those measures with the optimal approaches.</p>	<p><b>9.3 New Set of Expectations, New Measures</b></p> <p><u>9.3.1 The level of confidence in the health safety will help to bring back passengers to the airport. Therefore, airports must put in place all the measures expected by the passengers to regain their trust. The most expected measure is by far the mandatory use of masks for all passengers and airport staff (requested by 48% of all respondents). This measure is followed by a COVID-19 test prior to the trip (28%), hand sanitizing stations (28%) and a contactless experience (27%). Some measures generate more interest in specific regions. For example, temperature checks on all passengers are more popular in Africa; a COVID-19 test prior to the trip would reassure passengers in Asia-Pacific and Middle East; hand sanitizing stations are required in Latin America/Caribbean, and a contactless experience would be successful in Africa, Asia-Pacific, and the Middle East. Respondents that are less confident that airports are providing a safe environment to passengers would be reassured by: 1) the mandatory mask; 2) the COVID-19 test prior to the trip; and 3) the contactless experience. Some measures have generated less interest, such as the physical distancing, the improvement of air quality, and the COVID-19 test upon arrival.</u></p> <p><u>9.3.2 These new measures in place</u> serve as important visual cues to reassure the passengers. Therefore, it is critical to not only have the right measures in place, but also to deliver those measures with the optimal approaches.</p>
<p><b>9.4 Actions:</b></p> <p><del>• Seek to understand how this crisis will affect passenger behaviour, expectations and satisfaction.</del></p> <ul style="list-style-type: none"> <li>• Emphasize the importance of your employees and their satisfaction, including the integral role that will have on passenger satisfaction.</li> <li>• . . .</li> </ul>	<p><b>9.4 Actions</b></p> <ul style="list-style-type: none"> <li>• <u>Implement the right health safety measures to meet your passengers' expectations. Measure their level of satisfaction towards these measures and adjust if needed.</u></li> <li>• Emphasize the importance of your employees and their satisfaction, including the integral role that will have on passenger satisfaction.</li> <li>• . . .</li> </ul>

SECTION 10	Waste Management
<p>According to IATA, differentiated waste treatment should only be given in flights with symptomatic passengers and/or crew, for which all materials, including partially consumed meals, beverage containers and disposable items, including used paper towels, tissues and PPE generated while treating or supporting the passenger or crew, be placed in the biohazard waste disposal bag (Universal Precaution Kit) and sealed for specialized treatment<sup>3</sup>. Service providers, including cleaning and catering companies, the airport operator and the local health authority should be informed. If no biohazard disposal waste bag is available, it is recommended to place the waste into double plastic bags, seal it, and consider it "biohazard" waste, disposing it according to national regulations for infectious waste; wash hands with soap and water (preferred) or alcohol-based hand rub. The bag can be marked with a "biohazard" inscription and the flight details to facilitate tracking.</p> <p><sup>3</sup> IATA Guidance for Cabin Operations During and Post Pandemic, Edition 2 – 07 May 2020. Available: <a href="https://www.iata.org/contentassets/df216feeb8bb4d52a3e16befe9671033/iata-guidance-cabin-operations-during-post-pandemic.pdf">https://www.iata.org/contentassets/df216feeb8bb4d52a3e16befe9671033/iata-guidance-cabin-operations-during-post-pandemic.pdf</a></p>	<p><b>10.2.3</b> According to IATA, differentiated waste treatment should only be given in flights with symptomatic passengers and/or crew, for which all materials, including partially consumed meals, beverage containers and disposable items, including used paper towels, tissues and PPE generated while treating or supporting the passenger or crew, be placed in the biohazard waste disposal bag (Universal Precaution Kit) and sealed for specialized treatment<sup>5</sup>. Service providers, including cleaning and catering companies, the airport operator and the local health authority should be informed. If no biohazard disposal waste bag is available, it is recommended to place the waste into double plastic bags, seal it, and consider it "biohazard" waste, disposing it according to national regulations for infectious waste; wash hands with soap and water (preferred) or alcohol-based hand rub. The bag can be marked with a "biohazard" inscription and the flight details to facilitate tracking. <u>Additional information can be found on the "IATA Cabin Guidance during COVID-19 Pandemic" document.</u></p> <p><sup>5</sup> IATA Guidance for Cabin Operations During and Post Pandemic, Edition 4 – 08 Sept 2020. Available: <a href="https://www.iata.org/contentassets/df216feeb8bb4d52a3e16befe9671033/iata-guidance-cabin-operations-during-post-pandemic.pdf">https://www.iata.org/contentassets/df216feeb8bb4d52a3e16befe9671033/iata-guidance-cabin-operations-during-post-pandemic.pdf</a></p>
<p>If health authorities are conducting health screenings, including COVID-19 tests onsite the airport, <del>the</del> symptomatic passengers, their PPE and waste should also be treated separately. The US Centers for Disease Control and Prevention (CDC) recommend treating all body fluids (such as respiratory secretions, diarrhea, vomit or blood) as infectious, and to properly dispose of gloves and other disposable items that came in contact with the sick person or body fluids in biohazard bag or a secured plastic bag labeled as "biohazard".<sup>4</sup></p>	<p><b>10.3.2.5</b> If health authorities are conducting health screenings, including COVID-19 tests onsite the airport, <u>and they had contact with</u> symptomatic passengers, their PPE and waste, <u>along with that of the symptomatic passengers</u> should also be treated separately. The US Centers for Disease Control and Prevention (CDC) recommend treating all body fluids (such as respiratory secretions, diarrhea, vomit or blood) as infectious, and to properly dispose of gloves and other disposable items that came in contact with the sick person or body fluids in biohazard bag or a secured plastic bag labeled as "biohazard".</p>
	<p><b>10.3.2.6</b> <u>SARS-CoV-2, the virus responsible for the Coronavirus disease COVID-19, can survive up to 72 hours in certain surfaces depending on the humidity content, the room temperature and the surface in which the virus is, amongst other factors. If allowed by the local authority, an alternative to hazardous waste treatment could be to store the contaminated waste for a given period of time (around 72 hours). This may not be an option for many airports due to space constraints and operational challenges.</u><sup>6</sup></p> <p><sup>6</sup> United Kingdom Department for Environment Food and Rural Affairs, "Guidance on prioritising waste collection services during coronavirus (COVID-19) pandemic," 14 12 2020. Available: <a href="https://www.gov.uk/government/publications/coronavirus-covid-19-advice-to-local-authorities-on-prioritising-waste-collections/guidance-on-prioritising-waste-collection-services-during-coronavirus-covid-19-pandemic#recommendations-for-prioritising-waste-co">https://www.gov.uk/government/publications/coronavirus-covid-19-advice-to-local-authorities-on-prioritising-waste-collections/guidance-on-prioritising-waste-collection-services-during-coronavirus-covid-19-pandemic#recommendations-for-prioritising-waste-co</a>. [Accessed 19 01 2021].</p>

<p><b>10.4 Recyclable Material</b></p> <p>Recycling can be kept during this pandemic and could help alleviate the pressure on the waste handlers dealing with the increase in hazardous waste coming from health care facilities.</p> <p>However, during an outbreak, recyclable material may get contaminated, either by infected used items (e.g., a water bottle used by an ill passenger) or by misplaced waste (e.g., an infected face mask thrown in the recycling bin). For this reason, hygiene measures should be intensified while also ensuring staff is using the appropriate PPE when handling recyclables. See section on managing waste for more detail.</p>	<p><b>10.4 Recyclable Material</b></p> <p><u>10.4.1</u> Recycling can be kept during this pandemic and could help alleviate the pressure on the waste handlers dealing with the increase in hazardous waste coming from health care facilities.</p> <p><u>10.4.2</u> However, during an outbreak, recyclable material may get contaminated, either by infected used items (e.g., a water bottle used by an ill passenger) or by misplaced waste (e.g., an infected face mask thrown in the recycling bin). For this reason, hygiene measures should be intensified while also ensuring staff is using the appropriate PPE when handling recyclables. <u>It could be considered to store the recyclables for a given period of time—around 72 hours, if space is available—to reduce the risk of contaminating staff. If this approach is taken, it is recommended to mark the bags with the collection date, and keep them properly stored on a closed room, including considerations on pest control.</u> See section on managing waste for more detail.</p>
<p><b>10.9 Actions:</b></p> <ul style="list-style-type: none"> <li>Consider measures to protect staff while handling contaminated waste.</li> <li>Follow the region/local-specific guidelines, including those from the local health authorities, and constantly monitor their development.</li> <li>Develop airport guidelines/procedures that: <ul style="list-style-type: none"> <li>are risk-based, outcome-driven and be supported by medical/scientific evidence;</li> <li>are simple and practical;</li> <li>balance the need for reassuring staff and passenger safety with managing associated risks should be promoted; and</li> <li>are constantly reviewed for impact, suitability and effectiveness.</li> </ul> </li> <li>Coordinate and collaborate with all stakeholders responsible for any step of waste handling, disposal, communications, and training</li> </ul>	<p><b>10.9 Actions</b></p> <ul style="list-style-type: none"> <li>Consider measures to protect staff while handling contaminated waste.</li> <li>Follow the region/local-specific guidelines, including those from the local health authorities, and constantly monitor their development.</li> <li><u>Educate passengers and staff to properly dispose potentially biohazardous waste to avoid cross-contamination. Airports could consider using clearly marked no-touch bins inside the terminal areas with specific coloured plastic bags inside them for this purpose</u></li> <li><u>Recycling can continue during the pandemic and could alleviate the pressure to handle increased amounts of hazardous waste from medical facilities</u></li> <li>Develop airport guidelines/procedures that: <ul style="list-style-type: none"> <li>are risk-based, outcome-driven and be supported by medical/scientific evidence;</li> <li>are simple and practical;</li> <li>balance the need for reassuring staff and passenger safety with managing associated risks should be promoted; and</li> <li>are constantly reviewed for impact, suitability and effectiveness.</li> </ul> </li> <li>Coordinate and collaborate with all stakeholders responsible for any step of waste handling, disposal, communications, and training</li> </ul>

SECTION 11	Recovery Communications
<p>The way the impacts and effects of the COVID-19 pandemic unfolded across the world, however, <del>has</del> placed unprecedented pressure on airport communications teams.</p>	<p>The way the impacts and effects of the COVID-19 pandemic unfolded across the world, however, placed unprecedented pressure on airport communications teams. <u>Airports have had to maintain clear communications to staff, passengers, and stakeholders, often with limited or reduced resource, and, in many cases, while working remotely.</u></p>
	<p><u>As preparations are made to support operations during a more sustained recovery period expected in 2021, it is important that airports are able to match operational and communications activity.</u></p>
<p>To support this, communication links should be established by the airport with internal and external partners. <del>It is important that</del> close links are developed with local government, regulators and public health bodies <del>so that</del> information <del>provided by</del> these bodies <del>or developed in close collaboration with the public health authorities,</del> can be communicated to passengers, staff and stakeholders, and partners.</p>	<p><u>11.1.3</u> To support this, <u>ACI advised that</u> communication links should be established by the airport with internal and external partners. <u>Developing</u> close links with local government, regulators and public health bodies <u>allows for a better flow of</u> information <u>with</u> these bodies <u>so developments</u> can be communicated to passengers, staff and stakeholders, and partners.</p>
<p>As the <del>outbreak unfolded</del>, national regulators and health authorities <del>reacted to the spread of the virus by</del> introducing measures directly affecting aviation, including travel bans and restrictions. These measures, coupled with decisions taken by aircraft operators <del>to reduce</del> traffic, dramatically affected airport operations. <del>As the pandemic continued to unfold,</del> airports around the world <del>began to reduce</del> capacity by closing infrastructure such as terminals, concourses, piers and parts of the airfield.</p>	<p><u>11.2.1</u> As the <u>pandemic continues to unfold, with sporadic and intermittent signs of recovery</u>, national regulators and health authorities <u>continue to introduce</u> measures directly affecting aviation, including travel bans and restrictions. These measures, coupled with decisions taken by aircraft operators <u>on</u> traffic, <u>continue to</u> dramatically affect airport operations. Airports around the world <u>have had to adapt</u> capacity, <u>managing</u> infrastructure such as terminals, concourses, piers and parts of the airfield.</p>
<p>To support this, airport communications teams <del>were then</del> focused on communicating to passengers, staff and stakeholders on the changes in operations and reductions in services, as well as the closure of terminals and infrastructure so that those who were still required to work or needed to travel could navigate the new arrangements.</p>	<p><u>11.2.2</u> To support this, airport communications teams <u>should be</u> focused on communicating to passengers, staff and stakeholders on the changes in operations and reductions in services, as well as the closure of terminals and infrastructure so that those who were still required to work or needed to travel could navigate the new arrangements.</p>
<p>As the industry <del>prepares</del> to plan for restart and recovery, airports will need to work out how best to communicate to staff and passengers how any reopening of infrastructure or resumption of services will be delivered.</p>	<p><u>11.2.4</u> As the industry <u>continues to plan for a more thorough</u> restart and <u>a sustained long-term</u> recovery, airports will need to work out how best to communicate to staff and passengers how any reopening of infrastructure or resumption of services will be delivered.</p>

<p><b>11.3</b>      Preparing for Recovery <del>and Restart</del></p> <p>To address public concern over travel and the spread of COVID-19, it is likely that governments and public health authorities <del>will</del> supplement airport practices with new passenger and staff processing procedures. Airports will have an important role to play in rebuilding the trust that aviation and travel is safe and does not pose a risk to public health—and communications will be at the forefront of this.</p>	<p><b>11.3</b>      Preparing for <u>continued</u> recovery</p> <p><u>11.3.1</u>      To address public concern over travel and the spread of COVID-19, governments and public health authorities <u>have in many cases</u> supplement<u>ed</u> airport practices with new passenger and staff processing procedures. Airports have an important role to play in rebuilding the trust that aviation and travel is safe and does not pose a risk to public health—and communications will be at the forefront of this.</p>
<p><del>Any recovery</del> and restart of operations <del>is likely to be</del> gradual and staggered, and governments and public health authorities <del>may introduce new procedures for passengers and staff to facilitate the reintroduction of</del> operations.</p>	<p><u>11.3.2</u>      <u>Experience around the world has shown that the</u> restart <u>and recovery</u> of operations <u>has been</u> gradual and staggered, and governments and public health authorities <u>have imposed new restrictions that affect</u> operations.</p>
<p>Critical to the success of <del>any restart and</del> recovery will be the communication links that have been established by the airport with internal and external partners and with local government, regulators and public health bodies (outlined above). These networks will allow information provided—or new procedures advised—by these bodies or developed in close collaboration with the public health authorities, to be communicated to passengers, staff and stakeholders and partners swiftly, clearly and consistently.</p>	<p><u>11.3.3</u>      Critical to the success of a <u>sustained</u> recovery will be the communication links that have been established by the airport with internal and external partners and with local government, regulators and public health bodies (outlined above). These networks will allow information provided—or new procedures advised—by these bodies or developed in close collaboration with the public health authorities, to be communicated to passengers, staff and stakeholders and partners swiftly, clearly and consistently.</p>
<p>The way that the effects of the COVID-19 pandemic unfolded <del>showed</del> the value of flexibility and responsiveness in the face of an evolving and persistent crisis. This is a lesson that will need to be carried through as airports plan for recovery and restart.</p>	<p><u>11.4.1</u>      The way that the effects of the COVID-19 pandemic <u>have</u> unfolded <u>has shown</u> the value of flexibility and responsiveness in the face of an evolving and persistent crisis. This is a lesson that will need to be carried through as airports plan for recovery and restart.</p>
<p>Communications teams will need to have prepared flexible plans so that they can be scaled up or down as the recovery <del>and restart</del> escalates and, potentially, de-escalates. Communications teams should explore potential scenarios in advance.</p>	<p><u>11.4.2</u>      Communications teams will need to have prepared flexible plans so that they can be scaled up or down as the recovery escalates and, potentially, de-escalates <u>again</u>. Communications teams should explore potential scenarios in advance.</p>
<p><b>11.5</b>      Actions:</p> <ul style="list-style-type: none"> <li>• Establish communication links between the airport and internal as well as external partners.</li> <li>• . . .</li> </ul>	<p><b>11.5</b>      Actions</p> <ul style="list-style-type: none"> <li>• <u>Re-establish</u> communication links between the airport and internal as well as external partners.</li> <li>• . . .</li> </ul>



<b>SECTION 12</b>	<b>COVID-19 Testing Facilities at Airports</b>
	<b><u>NEW</u></b>

<b>SECTION 13</b>	<b>Vaccine Distribution – The Role of Airports</b>
	<b><u>NEW</u></b>

<b>SECTION 14</b>	<b>ACI Resources</b>
	<b><u>NEW</u></b>

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