



Impact Assessment on Airport Operations in Asia-Pacific and the Middle East due to COVID-19 Pandemic

**ACI Asia-Pacific
Task Force COVID-19
Version 1 – April 2020**





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Developed by the *ACI Asia-Pacific Task Force COVID-19*
(Version 1 – April 2020)

Introduction

The COVID-19 pandemic that broke out in early 2020 caused an unprecedentedly prolonged disruption to global air transport system. All major airports, especially those handling international passengers, faced catastrophic declines in traffic volumes. According to the latest [ACI Advisory Bulletin on the Impacts of COVID-19 on the Airport Business](#), the estimated drop in airport passenger traffic for the year of 2020, as compared to the business-as-usual forecasts, for Asia-Pacific and Middle East region are -42.1% and -36.5% respectively¹.

This document is aimed at providing policy makers and airport operators an **assessment** of the general impact **on airport operations** caused by the significant traffic drops due to the COVID-19 outbreak, so that they may use it as a reference in the formulation of policy to help the industry recover and the establishment of plans to resume operations as soon as the pandemic subsides.

Highlights of the Assessment

Based on the inputs gathered from the Task Force Members, a total of six major operational measures in response to the traffic decrease caused by the pandemic, e.g. a partial closure of airport facilities, are identified. Each measure is then assessed based on two factors: the expected duration of the impact caused by the pandemic, i.e. whether it is a long-, medium- or short-term effect; and the number of airports affected, e.g. the number of airports having to shorten the operational hours because of traffic decrease. The longer the duration and the more airports affected, the higher is the level of impact. [Appendix A](#) provides the details of the impact assessment methodology.

The table below sets out the key operational measures sorted in descending order of impact:

Operational Measure	Level of Impact to the Region
1) Airport Closure (Complete or Partial)	HIGH
2) Reduction of Operational Staffing Level	HIGH
3) Suspension or Deferral of Capital Projects for Airport Operations	HIGH
4) Adjustment to Staff Training	MEDIUM
5) Special Aircraft Parking Arrangement	MEDIUM
6) Shortened Hours of Operations	LOW

[Appendix B](#) to this document presents the details of the operational measures and the results of the impact analysis based on the methodology described in [Appendix A](#). The details given in [Appendix B](#) is not meant to be exhaustive but rather aim to give a general idea of the overall operational impacts of the pandemic in the region as a whole.

¹ Estimated figures as of the 1 April 2020

Conclusion

The extent of the COVID-19 pandemic, the speed with which it spread, and its impact on air transport are unprecedented. As a result of massive flight cancellations and blanket travel restrictions, no airport can be immune from the operational impacts depicted in this document. Based on the assessment, it can be concluded that:

- The airports surveyed in the region are encountering at least one of the operational impacts, including *airport closure (complete or partial), reduction of operational staffing level, suspension or deferral of capital projects for airport operations, disruption to staff training, special aircraft parking arrangement and shortened hours of operations*; and
- Many of the operational impacts will last for months or years.

Airport operators are recommended to make reference of this document when they prepare to gradually resume and ramp up to normal operations as soon as the pandemic subsides. Also, these scenarios of operational impacts stated in this document, which might not have been foreseen previously prior to COVID-19, should be considered for emergency planning in the future.

In addition, since the operational impacts are expected to significantly hinder airports' capability to generate revenues in the near future, States are recommended to take into the account of the possible duration and extent of these operational impacts when deciding financial relief measures to assist the airport industry.

Appendix A (Impact Assessment Methodology)

The impact assessment is conducted accordingly to the survey responses collected from 15 of the Task Force members². The methodology used for the assessment is based primarily upon two parameters listed as follow:

- 1) **Parameter A: Expected Duration of Impacts**
 - *Short-term (i.e. weeks after the pandemic recedes)*
 - *Medium-term (i.e. months after the pandemic recedes)*
 - *Long-term (i.e. months to years after the pandemic recedes)*
- 2) **Parameter B: Number of airports affected in the Asia-Pacific region**
 - *Minority (i.e. less than 30% of airports surveyed are impacted)*
 - *Some (i.e. between 30% to 70% of airports surveyed are impacted)*
 - *Majority (i.e. more than 70% of airports surveyed are impacted)*

An overall level of impact is developed by combining Parameters A and B, represented in a three-level scale of LOW, MEDIUM and HIGH. Please refer to the matrix below for details:

	Expected Duration of Impact		
	SHORT-TERM Impacts may last for weeks after the pandemic recedes	MEDIUM-TERM Impact may last for months after the pandemic recedes	LONG-TERM Impact may last for months to years after the pandemic recedes
No. of Airports Impacted in the Region			
MINORITY <30% of airports surveyed	LOW - 1 -	LOW - 3 -	MEDIUM - 6 -
SOME 30%-70% of airports surveyed	LOW - 2 -	MEDIUM - 5 -	HIGH - 8 -
MAJORITY >70% of airports surveyed	MEDIUM - 4 -	HIGH - 7 -	HIGH - 9 -

(Impact assessment matrix)

² There are 36 members in the TF in total. The 15 responders included: Bahrain, Beijing Capital, Brisbane, Changi, Hong Kong, Incheon, Kansai, Macau, Mactan-Cebu, Narita, Paro, Perth, Queen Alia, Shanghai (Pudong + Hongqiao) and Sharjah Airport.

Appendix B (Impact Assessment on Airport Operations)

	Areas of Measure	Details of Measure	No. of Airports Affected	Expected Duration of Impacts	Overall Impact to the Region
1.	Airport Closure (Partial/Complete)	<p><u>Complete Closure</u></p> <ul style="list-style-type: none"> • Airport closed operations entirely; • Suspension of all inbound and outbound passenger flights, and transit of airline passengers; • Exceptions only given for repatriation, medical and essential cargo flights; • The complete closure is usually in line with respective government directives for provincial or national lockdown; • Examples: <ul style="list-style-type: none"> ○ <i>Phuket Airport (HKT)</i> – entire airport is closed from 10-30 April 2020, subject to further extension; ○ <i>Abu Dhabi Airport (AUH)</i> – all flights have been stopped since 17 March 2020, except limited number of essential cargo and repatriation flights. <hr/> <p><u>Partial Closure</u></p> <ul style="list-style-type: none"> • Airports remain open and operational, but parts of the airport infrastructure/facilities are closed; • Aims to save costs in utilities and cleaning, and to optimize resources to better match the low demand; • Examples of partially closed infrastructure/facilities include but not limited to: <i>terminal building; apron; taxiway; runway; check-in counter; departure and arrival gate; carpark; baggage claim belts; terminal taxi stand; automated people mover; security checkpoint</i> 	Majority	Medium-term	HIGH

		<p><i>lane and equipment; customs areas; immigration areas; transit areas; and airport pier;</i></p> <ul style="list-style-type: none"> • Some of these closed infrastructure/facilities are not expected to be re-open for a while until passenger traffic resume to pre-COVID-19 level; • Examples: <ul style="list-style-type: none"> ○ <i>Changi Airport (SIN)</i> - closure of Terminal 2 of for a period of 18 months from 1 May 2020 to accelerate expansion works at the terminal. During this period, airlines operating from T2 will be relocated to the remaining terminals; ○ <i>Narita Airport (NRT)</i> – closure of Runway B (one of the two runways at the airport) from 12 April 2020. 			
2.	Reduction of Staffing Level	<ul style="list-style-type: none"> • Reduction in the number of operational staff to the bare minimum across various divisions, including security, airside operations, terminal operations and customer service; • Front-line staff rostering has been reduced to “skeleton crew” just to ensure the remaining aeronautical operations are not compromised; • Other non-essential operational staff, including those from the 3rd party contractors, are furloughed, if not laid off, until further notice. 	Majority	Medium-term	HIGH
3.	Suspension or Deferral of Capital Projects for Airport Operations	<ul style="list-style-type: none"> • With the glooming prospect of the aviation market in the near future, some airports have deferred or suspended on-going or future capital projects for airport operations (e.g. terminal expansion, building of additional runway, security checkpoint revamp); 	Some	Long-term	HIGH

4.	Adjustment to Staff Training	<ul style="list-style-type: none"> • Many training sections (e.g. for security and safety personnel) have been stopped or changed to online module during the outbreak of the COVID-19 period. And many of the furloughed staff are unable to attain adequate training as required; • With the disruption in training schedule, some of the licensing and certification requirements of specialized functions (e.g. security screeners) may have to be adjusted accordingly, in collaboration with respective authority, to ensure personnel competency are not compromised. 	Some	Medium-term	MEDIUM
5.	Special Aircraft Parking Arrangement	<ul style="list-style-type: none"> • Special arrangement is needed for overflow aircraft parking, as the number of grounded aircrafts frequently exceed the number of stands available; • Many grounded aircraft are being parked in maneuvering areas, such as taxiways and even runways. This is a particular concern for hub airports with home-based carrier; • Airports are required to provide additional safety and security procedures to facilitate the essential maintenance and access to the aircraft by the airlines; • This special arrangement is expected to last for months until the full recovery of the airline market. 	Some	Medium-term	MEDIUM

6.	Shortened Hours of Operations	<ul style="list-style-type: none"> • A small number of airports have shortened their hours of operations to match the low demand of passenger traffic (i.e. down to certain hours per day); • Examples: <ul style="list-style-type: none"> ○ <i>Brisbane Airport (BNE)</i> – shortening hours of operations from 24/7 to 0500-2330 per day. ○ <i>Perth Airport (PER)</i> – hours of operations for international terminal will be limited to 1300-2300 daily. • However, most airports in the Asia-Pacific region, which still remain operational, have not restricted their hours of operations. 	Minority	Short-term	LOW
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