



ASSEMBLY — 40TH SESSION

EXECUTIVE COMMITTEE

Agenda Item 14: Facilitation Programmes

ACCOMMODATING MORE PASSENGER TRAFFIC THROUGH MORE EFFICIENT FACILITATION

(Presented by Singapore, and co-sponsored by the United Kingdom)

EXECUTIVE SUMMARY

As air travel demand continues to grow, capacity is becoming a constraint at many airports. Physical infrastructural expansion is necessary but takes time, resources and investments. To mitigate this, different initiatives could be applied to facilitate passenger processing including through automation and use of biometric technologies for faster and more accurate processing of passengers. Setting of ground operations efficiency standards will enhance facilitation processes to allow more passengers to be accommodated within the confines of existing physical space and still meet passengers' satisfaction.

<i>Strategic Objectives:</i>	This working paper relates to Strategic Objective – Security and Facilitation.
<i>Financial implications:</i>	Not applicable.
<i>References:</i>	Annex 9 — <i>Facilitation</i> Annex 17 — <i>Security</i>

1. INTRODUCTION

1.1 As air travel demand continues to grow, capacity is becoming a constraint at many airports. New airports are being built and existing terminals expanded to increase physical handling capacity. However, physical infrastructural expansion takes time, resources and investments. Improving on operational and technical processes through the use of technology could improve passenger facilitation.

2. INFORMATION

Automation to Increase Passenger Processing Efficiency and Handling Capacity

2.1 Traditionally, passengers at airports have been processed by service agents from check-in, bag drop, immigration, security clearance and boarding to issue boarding passes, tag bags and verify

identity documents.

2.2 Technological advancements provide for automation of a number of these processes from e-ticketing, automated check-in kiosks to issue boarding passes, and biometric technology to verify passports, and match against passenger information. Automation allows for cross verification across different data points, enhancing security with the reduction of human error, and increasing processing speed. Shorter processing time translates to more handling capacity for a given physical space and increases passenger satisfaction. This is consistent with ICAO Annex 9 Recommended Practice 6.8¹ on the implementation of automated facilities for passenger and baggage processing.

2.3 A good starting point for States and airports to embark on their automation journeys would be the implementation of self-service check-in and bag drop, as they are among the most manpower intensive passenger-facing touchpoints at airports. They are also the first touchpoint in a departing passengers' journeys, which highly affects their levels of satisfaction at the airport.

Establishment of Ground Operations Efficiency Standards

2.4 Airport processes typically involve multiple stakeholders, from government agencies, airport operator and airlines to ground handlers and security service providers. Close collaboration across the different stakeholders would be necessary to effect improvements to airport processes. Establishing ground operations efficiency standards serves to align expectations across airport stakeholders to achieve a common outcome. ICAO Annex 9 Recommended Practices 3.37² and 3.40³ provides for establishment of operational efficiency standards.

2.5 The establishment of ground operations efficiency standards for key passenger processes such as check-in, departure/arrival immigration, security clearance and checked-in baggage presentation would enhance airport facilitation across these processes. There should be regular monitoring and management of these efficiency standards through measurement of efficiency performance and passenger satisfaction surveys at each key processes to identify trends and impediments to passenger facilitation. The survey results provide objective inputs for operational issues to be addressed. The survey outcomes and efficiency measurements can be discussed at the multi-party coordination platforms, which in Singapore include the National Air Transport Facilitation Committee (NATFC) for facilitation and National Civil Aviation Security Committee (NCASC) for security.

Case Study: Implementation of Automated Processes at Singapore Changi Airport

2.6 As air traffic at Singapore Changi Airport continues to grow, the airport community has identified the need for more touchpoints to be automated to provide a stepped increase in passenger processing efficiency. Singapore commenced implementation of biometric-enabled check-in kiosks and automated bag drops in 2015. Automated document checks at departure access control and automated boarding were introduced in 2017. In introducing these technologies, Singapore's NATFC reviewed

¹ Contracting States, airport and aircraft operators, where appropriate and after consultation, should implement automated facilities for passenger and baggage processing.

² Contracting States, in cooperation with aircraft operators and airport management, should establish as a goal a total time period of 60 minutes in aggregate for the completion of required departure formalities for all passengers requiring not more than normal processing, calculated from the time of the passenger's presenting himself at the first processing point at the airport (i.e. airline check-in, security control point or other required control point depending on arrangements at the individual airport).

³ Contracting States, with the cooperation of aircraft operators and airport operators, should establish as a goal the clearance within 45 minutes of disembarkation from the aircraft of all passengers requiring not more than the normal inspection, regardless of aircraft size and scheduled arrival time.

existing policies and coordinated the implementation of changes to aviation security requirements with the NCASC to streamline passenger facilitation. Facial recognition technology specifically was introduced as a means of both reducing the number of paper-based identity checks for smoother passenger flows, and enhancing Singapore's existing layered security regime. The close coordination was also crucial in ensuring compliance with national legislation and standards which are in line with ICAO Annexes 9 and 17.

2.7 These automated processes have enabled a 25%-50% improvement in the clearance time per passenger. With the same footprint for check-in infrastructure at the airport, departing passenger traffic on airlines using these automated processes have increased by up to 19% over the last 4 years. The use of these technologies have also enabled airlines to redeploy manpower⁴ to focus on passenger education and ensuring customer service quality.

2.8 Going forward, there is a need to ensure that automated processes continue to deliver the expected efficiency and passenger satisfaction in support of the continued growth of Singapore Changi Airport. To this end, performance standards have been established for key self-service touchpoints, taking into account the nature of operations and passengers' expectations.

2.9 For the future, Singapore is establishing a "single token" concept to bring about the next stepped increase in passenger processing efficiency and capacity. This concept leverages improvements in biometric identification technology, to create a single token to verify passengers' identities throughout their airport journey. In doing so, it removes the need for repeated document presentation by passengers at each touchpoint and therefore expediting the flow of passengers.

3. CONCLUSION

3.1 As air travel demand continues to grow, capacity constraints at airports could be addressed through different initiatives to facilitate passenger processing. This includes the use of automated facilities for passenger processing, taking reference from ICAO Annex 9 Recommended Practice 6.8. Setting of ground operations efficiency standards may also allow more passengers to be accommodated within existing physical spaces while meeting passengers' satisfaction. The pace and extent of adoption of these initiatives should take into account each airport's unique operating context.

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⁴ Airlines have reported up to a 30% reduction in the ground handling manpower required for check-in.