



ICAO

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North American, Central American and Caribbean Office

WORKING PAPER

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**Eleventh North American, Central American and Caribbean Directors of Civil Aviation Meeting  
(NACC/DCA/11)**

Varadero, Cuba, 28-30 June 2023

**Agenda Item 4: NAM/CAR Regional Safety/Air Navigation Implementation  
4.2 Air Navigation Implementation Matters**

**AIRPORT EFFICIENCY PROGRAM**

(Presented by IATA)

**EXECUTIVE SUMMARY**

This working paper presents a proposal to implement an Airport Efficiency Program with aim to optimize the use of installed airport infrastructure in the NACC States, as well as to enhance the benefits provided by the implementation of Enroute and TMA's new airspace concepts.

<b>Action:</b>	- Urge States to implement an Airport Efficiency Program at the main airports to comprehensively optimize all operations at the airport, TMA and in route
<i>Strategic Objectives:</i>	- Safety, Capacity and Efficiency of Air Navigation - Environmental Protection
<i>References:</i>	- Global Air Navigation Plan - Regional Air Navigation Plan

**1. Introduction**

1.1 There is a close relationship between runway operations efficiency, aircraft separation applied by TWR/Approach Control and Airspace Design. An optimization of runway occupancy time, the application of the High Intensity Runway Operations (HIRO) Concept and departures from RWY/TWY intersections are examples of preconditions to the optimization of separation standards between arrivals, departures, and arrivals/departures. This enhanced separation standards will allow an optimum airport acceptance rate and, in consequence, a reduction of airborne/ground holdings, decrease of radar vectors and better flight profile. In this sense the application of Airport Efficiency Program could be considered as a previous requirement for a successful implementation of an Enroute and TMA's new airspace concept.

1.2

1.3 An optimization of operations in the vicinity of the airports, via the mentioned reduction of separation between aircraft, with focus on the runway capacity, also provides an optimum use of the airport infrastructure, allowing the correct prioritization of investments in the airport. For example, in case of a better use of the runway capacity, it is very likely the convenience of investing firstly in Passenger Terminal or Apron instead of investing in a new runway.

## 2. Discussion

2.1 There are several concepts/tools that can be applied separately or in sets to achieve the optimization of Runway Operations:

- a. Runway Occupancy Time Reduction Program;
- b. High Intensity Runway Operations;
- c. Reduced Runway Separation Minima (RRSM);
- d. Take-off from intersections;
- e. Preferential Runway Concept;
- f. Use of Omnidirectional Departures; and
- g. Independent Parallel Operations (Approaches and Departures) under VMC

2.2 All these procedures have the objective of reducing the runway occupancy time, to allow a reduction of separation between arrivals, between departure and between arrivals/departures, increasing runway capacity and efficiency, as well reducing ground and airborne holdings. The reduction of separation on final approach could be divided in two main categories:

- a. Reduction of separation on final approach with take-off between two arrivals (single or mixed runways); and
- b. Reduction of separation on final approach between successive approaches (runways used just for arrivals).

2.3 There are already examples in the Region, which could be used as benchmarking for other States, such as:

- a. High Intensity Runway Operations (HIRO) in Porto Alegre International Airport (SBPA) – AIC A 11/22
- b. Independent Approaches under VMC in SCEL - AIP-CHILE VOLUMEN I /AD 2.9-8 - 22 APR 2021
- c. Segregated operations under VMC in SBGR – AIP Brazil AD 2 SBGR 1-21 06 OCT 22

2.4 Both NACC/Task Group for Airspace Optimization and SAM/Airspace Study and Implementation Group included the analysis and implementation of the Airport Efficiency Program in their work program. In this, it will be important that States interested in such implementation use this program to holistically optimize all operations at the airport, TMA and in route.

3                   **Suggested action**

The NACC Meeting is invited to:

- 3.1                   Take note of the information presented in this working paper.
- 3.2                   Urge States to implement an Airport Efficiency Program in the main airports to optimize holistically all operations in the airport, TMA and Enroute, in coordination with NACC/Airspace Study and Implementation Group.

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