



ASSEMBLY — 39TH SESSION

TECHNICAL COMMISSION

Agenda Item 35: Aviation Safety and Air Navigation Standardization

USE OF SAFETY DATA FOR AERODROME DESIGN

(Presented by ACI, CANSO and ICCAIA)

EXECUTIVE SUMMARY

ACI, CANSO and ICCAIA have consistently urged the use of safety data to set airport design specifications aligned with safety requirements.

Action: The Assembly is invited to:

- a) support the work being done under the direction of the Air Navigation Commission, on the review of aerodrome design specifications, with a strong focus on the use of safety data and information
- b) support the sharing of safety information between States, airports, local partner organisations and international organisations that could contribute to these objectives

<i>Strategic Objectives:</i>	This working paper relates to Safety, Air Navigation Capacity and Efficiency and Economic Development of Air Transport Strategic Objectives.
<i>Financial implications:</i>	None.
<i>References:</i>	

¹ English, Arabic, Chinese, French, Russian and Spanish versions provided by ACI.

1. INTRODUCTION

1.1 Research by the industry has already provided convincing evidence to ICAO that taxiway separations can be reduced without any reduction in the level of safety, since aircraft deviations from centrelines were found to be smaller than assumed when the safety buffers were determined. The just-published amendment to Annex 14 accordingly includes reductions in the minimum taxiway separations and taxiway-to-object separations.

1.2 This reduction of taxiway separations is expected to be of great benefit to airport operators, permitting more flexibility in the design of terminals and facilities adjacent to taxiways, such as allowing the use of existing taxiways by aircraft with larger wingspans, and allowing accommodation of longer aircraft on parking stands as well as better utilization of existing infrastructure. It is also expected to reduce the cost of accommodating larger aircraft types at existing airports, and of building new facilities.

1.3 The focus is now turning to other design specifications, as described below. Modern aircraft have systems that provide very precise guidance on landing and take-off as well as taxiing, and this makes it timely to review all the design specifications in Annex 14, based on available safety data. Based on such data covering many years of operations, it appears that some of the provisions of Annex 14 go beyond what is necessary for safety.

2. DISCUSSION

2.1 The ANC has agreed a job card to review the Aerodrome Reference Code design method and governing parameters to provide provisions suitable for the design and development of aerodrome infrastructure and facilities, and amend the relating detailed design specifications as required using an operationally based approach, to eliminate any over-provision without benefit to safety.

2.2 This task will include the review of design specifications such as runway width, taxiway width, runway and taxiway shoulder width, runway and taxiway strip width, runway to taxiway separation, and obstacle limitation surfaces. A task force is examining the safety data relevant to these specifications, taking account of the technologies available at airports and on board aircraft, as reflected in actual operational performance.

2.3 The work has the strong support of ACI, CANSO and ICCAIA. As was done for taxiway separations, operational safety and aircraft performance data as well as incident data should be used to establish the level of safety associated with airfield design criteria, and sharing of such safety information between all parties could contribute to safety objectives.

2.4 ACI, CANSO and ICCAIA request the support of States in the continued pursuit of the objectives mentioned above, which have already been supported by a number of States that are involved in the Aerodrome Design and Operations Panel and the Air Navigation Commission.