

## **Safety Recommendation R1- [T-2023-22-1]**

### **ICAO action:**

- 1) Existing Standards and Recommended Practices (SARPs) in Annex 14 — Aerodromes, Volume I— Aerodrome Design and Operations, already aim at mitigating the risk of misalignment with the runway edge. For example, 5.3.17.2 recommends the provision of taxiway center line lights on a taxiway intended for use at night in runway visual range conditions of 300 m or greater, and paragraph 5.3.19.2 recommends the provision of turn pad lights on a runway turn pad intended for use at night. Aerodrome operators should make better use of these SARPs.
- 2) Low visibility conditions caused by fog or night operations increase the risk of confusion for flight crews. Such issues, which are related to human factors, should be addressed first. Amending existing SARPs for runway edge lighting system to ensure distinction with runway Centre line lighting system could introduce other sources of confusion and implementation challenges.
- 3) As to the markings, the runway centerline and edge markings are also different providing clear distinction from each other. Therefore, the VAWG does not agree to change them.
- 4) It is also important to note that the VAWG discussed the possible “increased risk of confusion due to a shallow angle between the taxiway and the runway”. Annex 14, Volume I already contains guidance/provisions to address this issue in Attachment A (21. Taxiway design guidance for minimizing the potential for runway incursions). The center line of an entrance taxiway should be perpendicular to the runway center line, where possible. This design principle provides pilots with an unobstructed view of the entire runway. Multi-taxiway entrances to a runway should be parallel to each other and should be distinctly separated by an unpaved area. This design principle allows each runway holding location an earthen area for the proper placement of accompanying sign, marking and lighting visual cues at each runway holding position.