



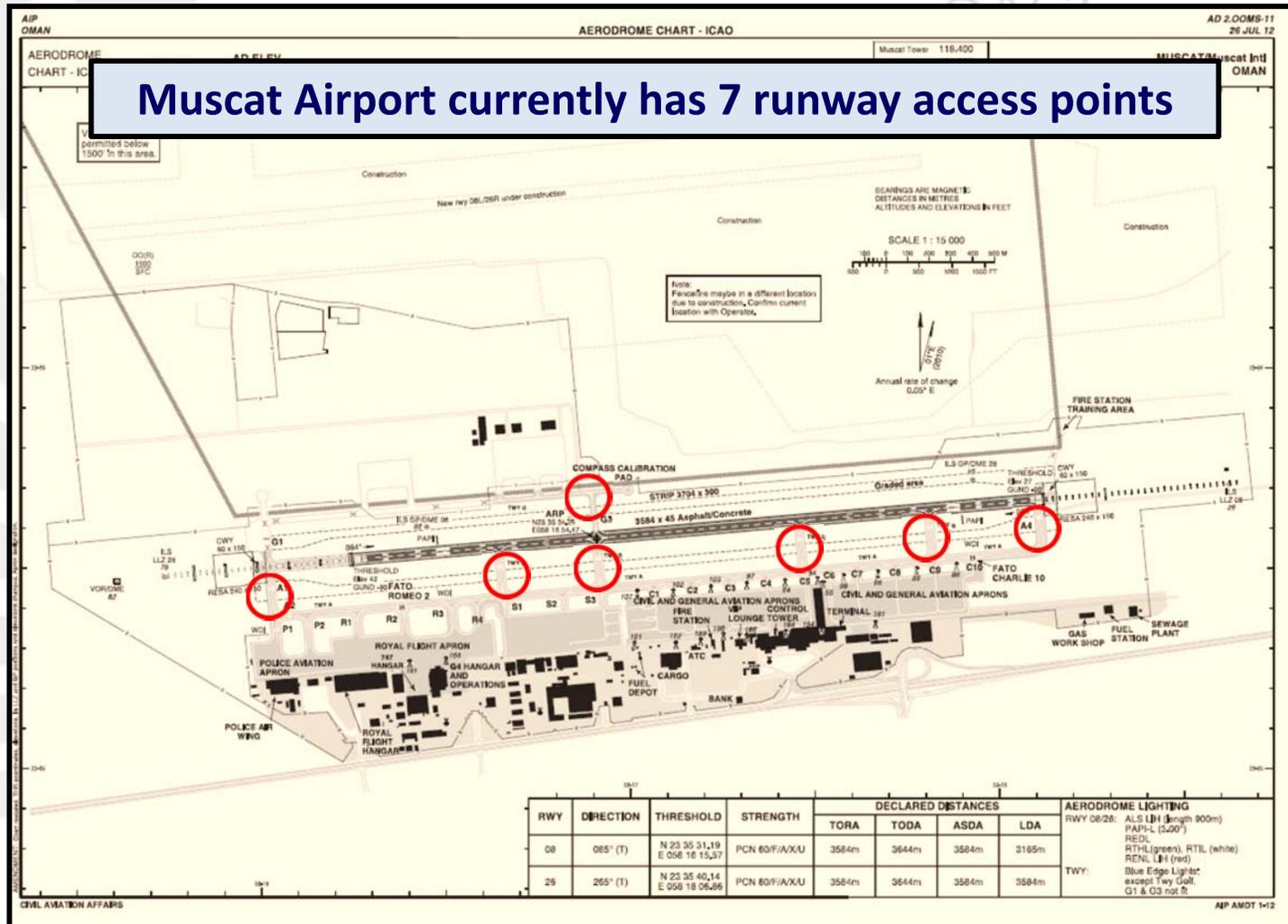
# Runway Incursion Prevention in Oman: Challenges and Solutions

**Waleed Khalfan Al-Riyami**

ICAO National Continuous Monitoring Coordinator  
ANS Safety Inspector – Air Traffic Control Examiner

Public Authority for Civil Aviation  
The Sultanate of Oman

# Muscat Airport Development

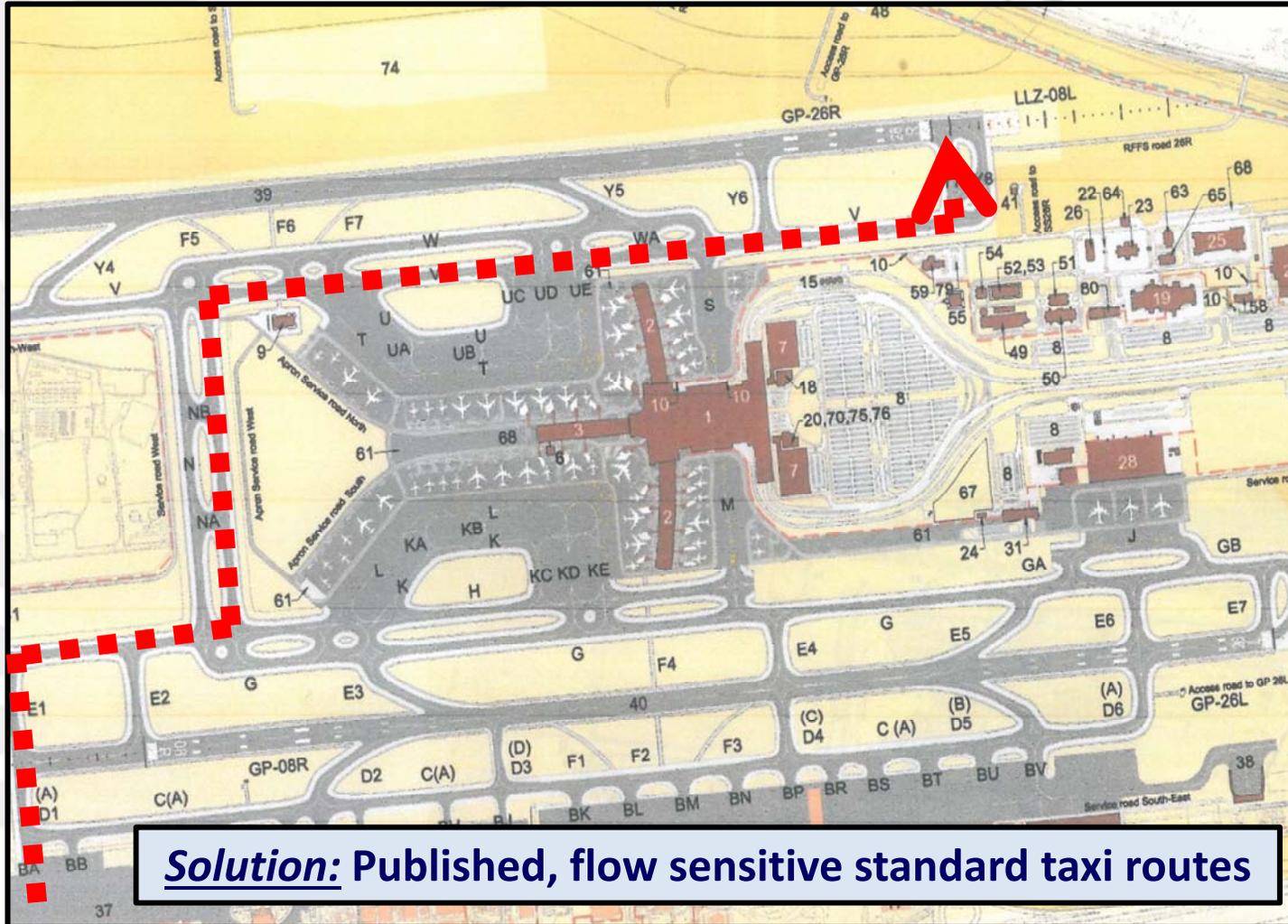


# Muscat Airport Development

**Challenge: With the new second runway there will be 28 runway access points**

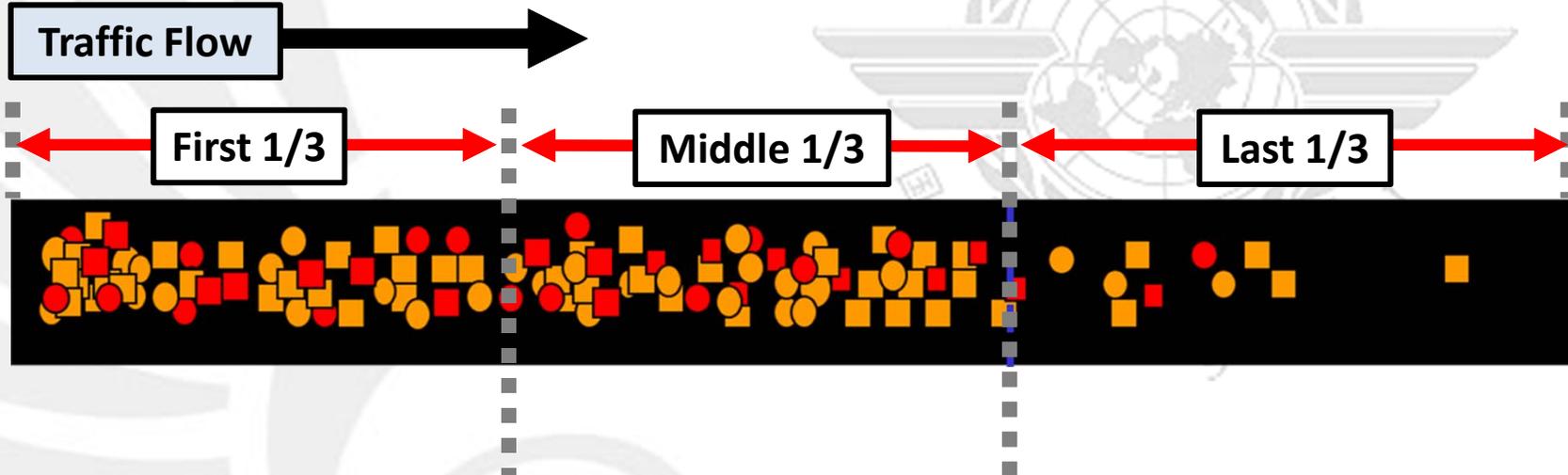


# Muscat Airport Development



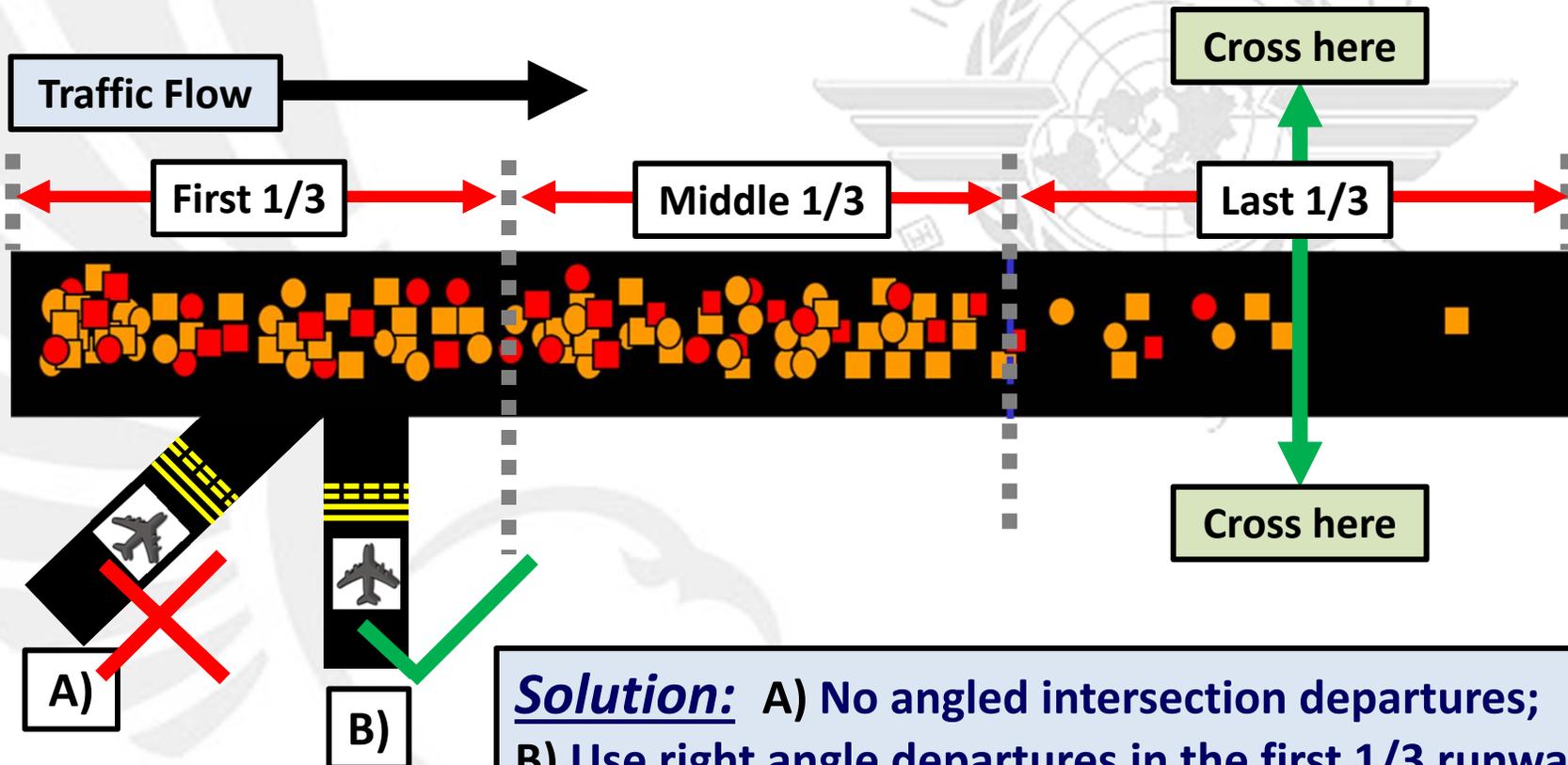
# Muscat Airport Development

**Challenge:** How to avoid runway incursions in the first 2/3 of the runway (high inertia area)



# Muscat Airport Development

**Solution:** Cross only in the last 1/3 of runway



**Solution:** A) No angled intersection departures;  
B) Use right angle departures in the first 1/3 runway

# Muscat Airport Development

**Challenge: Standard and consistent signage & markings**



**Solution: Ensure effective maintenance program**

## Muscat Airport Development



- Adherence to ICAO Document 9870;
- Clear and concise standard phraseology;
- English language proficiency for all;
- Full crossing clearance read-backs;
- Defined ATC crossing procedures;
- Mandatory 'hold short' of all runways;
- Video support for areas of non-visibility;
- Vehicle driver training and enforcement;
- SMS and local Runway Safety Teams.

***Just 3 more words...***

**Awareness;**

**Training ;**

**Participation.**



# Thank you!!!

