



# MIDANPIRG ATM SG/4 Meeting

## Amman, Jordan, 29 April – 3 May 2018

Bahrain FIR

Presented by

Dash Dulabh on behalf of  
Director Air Traffic Management  
Bahrain Civil Aviation Affairs



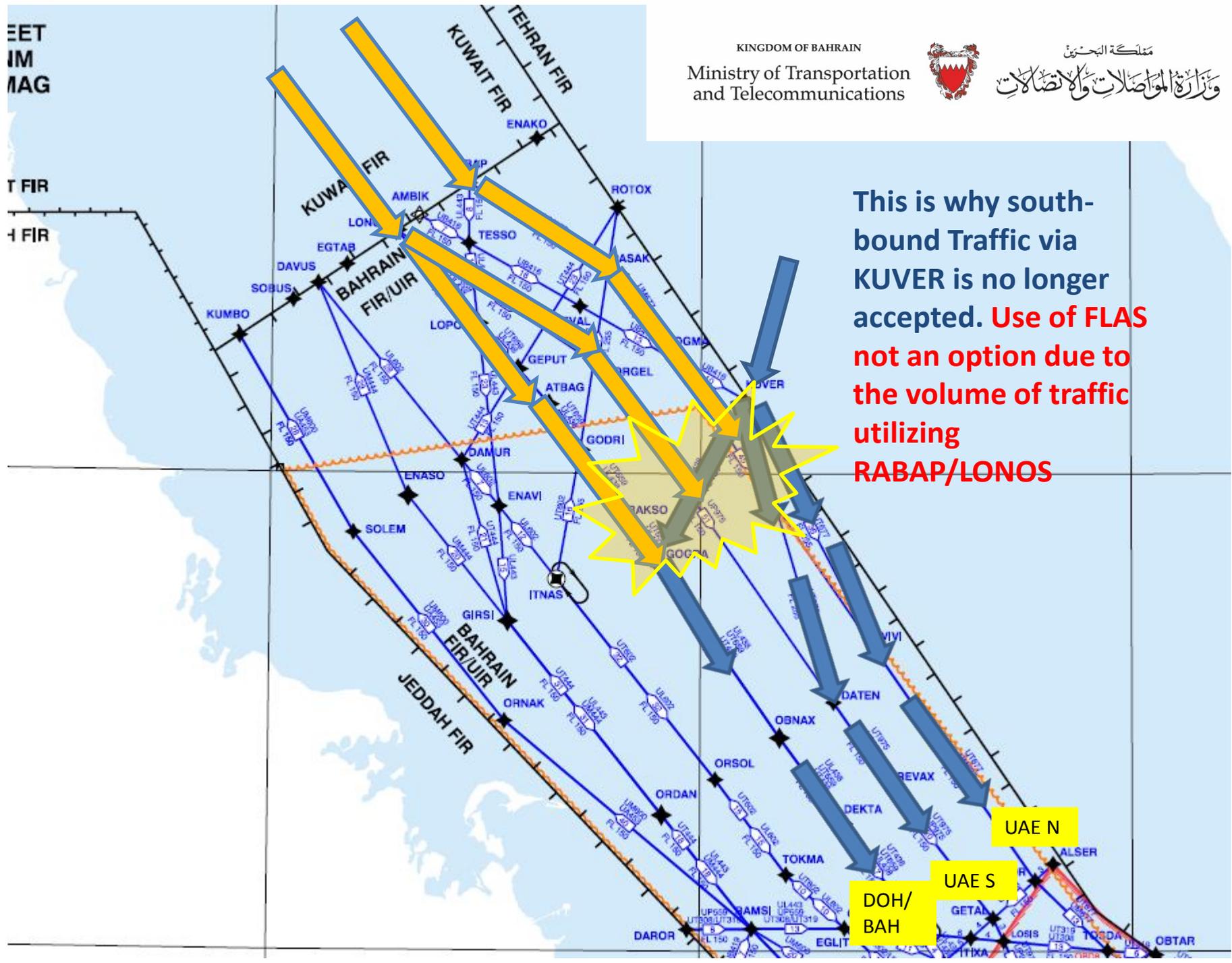
# Presentation Outline

- **ATS Routes improvements**
- **Additional ATS Routes**
- **Implemented or planned ATM Operational Improvements**
- **Ongoing ATM projects/initiatives**
- **Lessons Learned**



## ATS Routes improvements

- **Bahrain ATC is now fully RNAV 1 compliant achieving maximum route efficiency.**
- **Bahrain accepts traffic 10 MIT from all adjacent FIRs.**
- Contingency Routes developed in 2014 to avoid areas of military conflict have been successful in providing alternate routing and efficiency to all users. (As per ASBU Module B0-FRTO Flexible Routing Concept)
  - Due to restructuring in Baghdad FIR it was found that these contingency routes are no longer required by all customers for southbound traffic.
  - Safety assessments indicated that LONOS / RABAP route could not co-exist with the KUVER contingency route. ( see next slide) In conjunction with neighboring FIR's the "KUVER" route was gradually closed via FLAS implementation as the "LONOS/RABAP" routes were gradually re-opened.
  - Northbound traffic still has the option to utilize either UL602 DAVUS or UT602 ROTOX.



This is why south-bound Traffic via KUVIR is no longer accepted. Use of FLAS not an option due to the volume of traffic utilizing RABAP/LONOS

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## Additional ATS Routes

**Contingency routes have been developed for Qatar registered aircraft to facilitate such traffic facing restrictions.**

- UT800 available via DASUT to Tehran FIR
- UT430 available via RAGAS to Tehran FIR
- PATOM – TOKMA route joins UL602 DAVUS or UT602 ROTOX - **Note that this route saves several miles per flight over the previous required routing.**
- Other FIR Routings have been altered in order to safely facilitate these contingency routes

**Contingency routes have been developed for customers requesting or required to avoid OTR52 and OTR53.**

- UY856 developed because UP699 and OBBI STAR SOGAT1 arrival is effectively blocked for use due to OTR53 upper limit being recently raised
- UY604 developed for aircraft to avoid OTR52
- UZ622 and numerous other routings developed to connect neighboring FIRs through Bahrain have been established.





## Implemented or planned ATM Operational Improvements

- OLDI implementation with UAE ACC fully functional 02 July 2017.
- Revised LOA on 07 December 2017 with UAE-ACC to support UAE airspace restructuring and improve cross FIR traffic flow with particular emphasis on west bound traffic.
- Bahrain is fully ready to implement OLDI with other States
- Selected Level Alert (SLA) in ATC Display system has reduced the potential for level busts and reduced the impact of callsign confusion.
- ASMGCS level 2 implementation including ADSB vehicle tracking
- Expanding current MLAT coverage into a larger WAM environment
- Implementation of Multi-constellation ADSB surveillance for increased capacity and operational efficiency



## Ongoing ATM Projects/Initiatives

- New Bahrain FIC facility including new ATM systems are currently under development
- Ricochet ATC system recording project has been successfully implemented
- OBBI Take off and Landing CCTV monitoring system with full recording
- New NAVAIDS – ILS 12L, ILS30R, DVOR, fully implemented 26 April 2018
- ILS CAT II procedures currently under development planned implementation Q3 2018
- RNAV GNSS Approaches with Vertical guidance fully implemented 26 April 2018
- Revised OBBI STAR and new SIDs have been developed and pending publication
- Bahrain IFPS expecting to expand to GCC IFPS, revised action plan and draft States SLA in progress
- Flow Management Data ( DXB AMAN data) display on BAH ACC East sectors is under development



## Lessons Learned

The region has experienced significant challenges in the past few years, in traffic demand and political pressures.

Bahrain and its neighbors have maintained high levels of safety and satisfaction to their stakeholders

This is only possible due to the high level of cooperation received by all parties and it is clearly evident that each party is dedicated to ensuring the delivery of the highest levels of safety and efficiency to its airspace users.

To that end Bahrain would like to extend their thanks and gratitude to all the States and Airspace users for their cooperation, patience and understanding.

We will endeavor to work with customers, adjacent units, ICAO and IATA to manage current and future challenges.



KINGDOM OF BAHRAIN  
Ministry of Transportation  
and Telecommunications



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**Thank you !**

**We appreciate your attention and kind  
feedback**