

# Seventh Meeting of the APIRG Airspace and Aerodrome Operations Sub-Group (AAO/SG7)

## *USER PREFERRED ROUTES (UPR) TRIALS TO SUPPORT FREE ROUTE AIRSPACE IMPLEMENTATION IN THE CONTINENTAL AFI AIRSPACE*

*Presented by AFRAA on behalf of the African Aviation Industry Group – AAIG*

*AAIG Members: AFRAA, IATA, AASA, CANSO Africa, ACI Africa, Boeing.*

*AAIG Observers: AFCAC, ICAO, AfDB*

**12 – 16 August 2024**

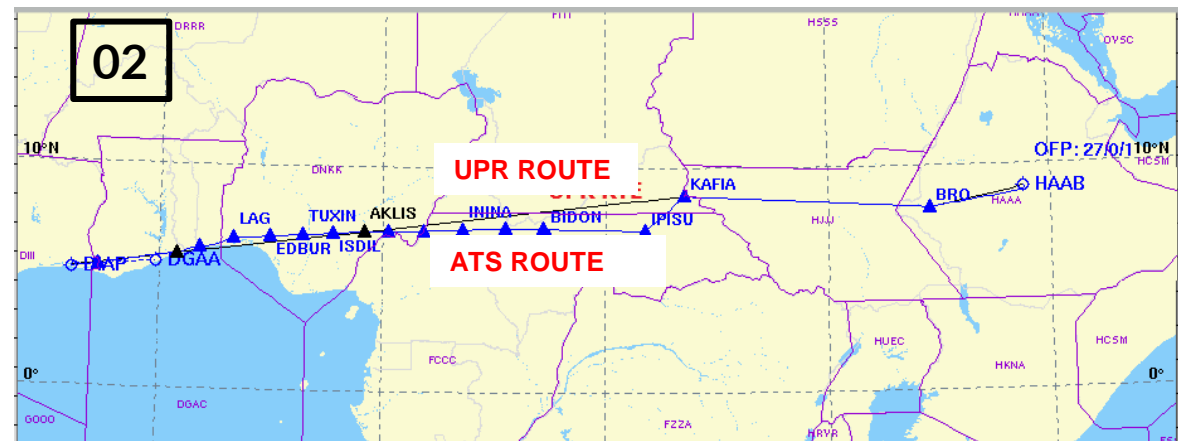
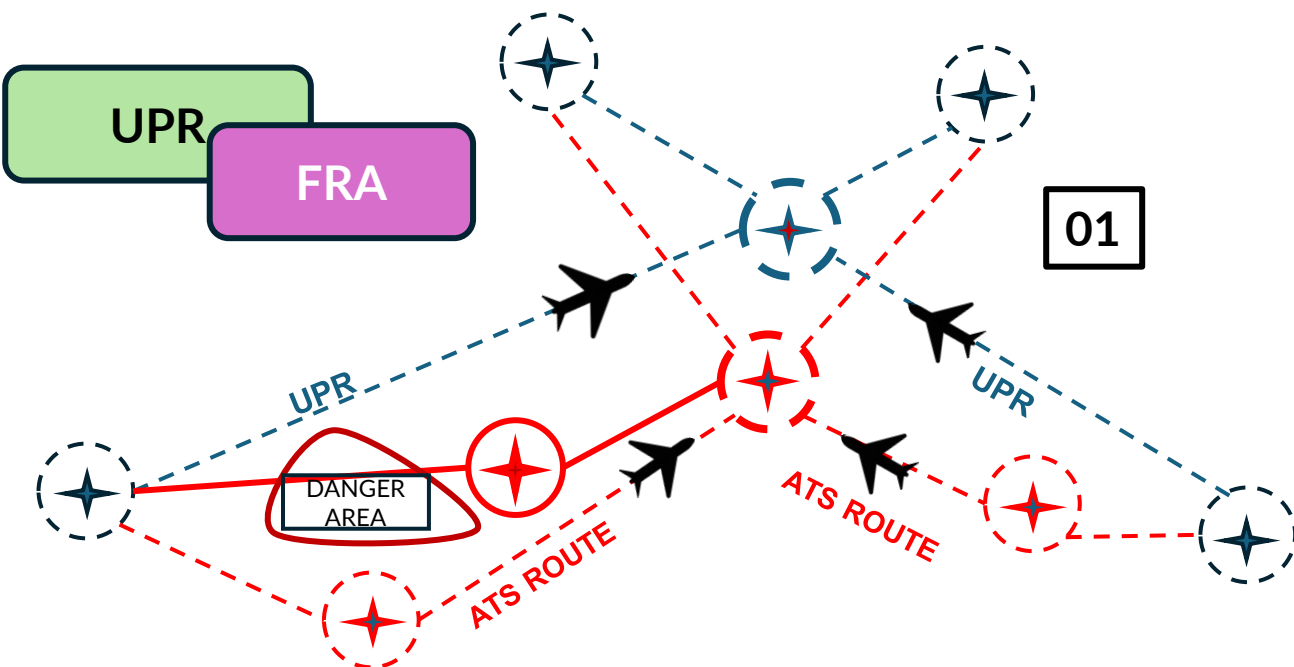


# INTRODUCTION

Implementing User-Preferred Routes (UPRs) through trial flights is an essential practical phase that precedes the Free Routing Airspace (FRA)

## OBJECTIVES

- ❖ Airspace management flexibility
- ❖ Fuel burnt & carbon footprint reduction
- ❖ Operating cost reduction
- ❖ Safety Enhancement



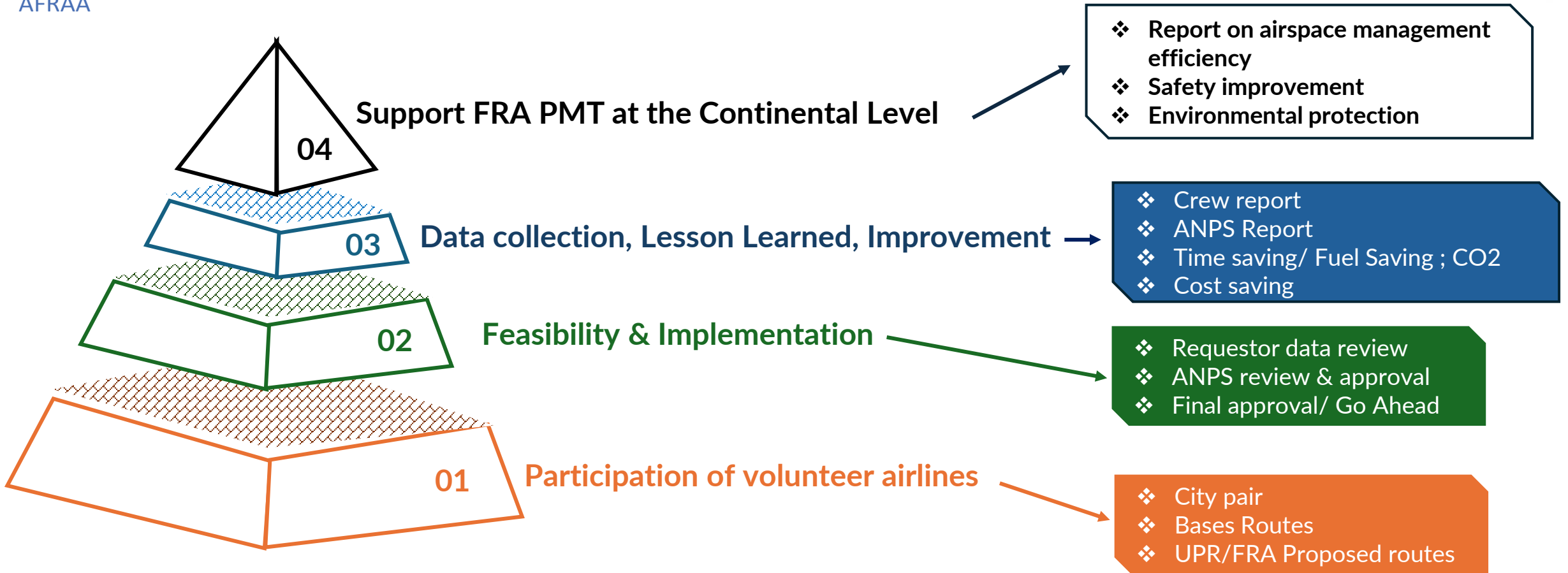
### ATS ROUTE.

HAAB BRO3A BRO DCT KAFIA UA410 IPISU UQ200 BIDON UQ200 LAG UL433 KETAT DCT ONESI DCT TAVAL TAVAL2D DIAP

### UPR ROUTE.

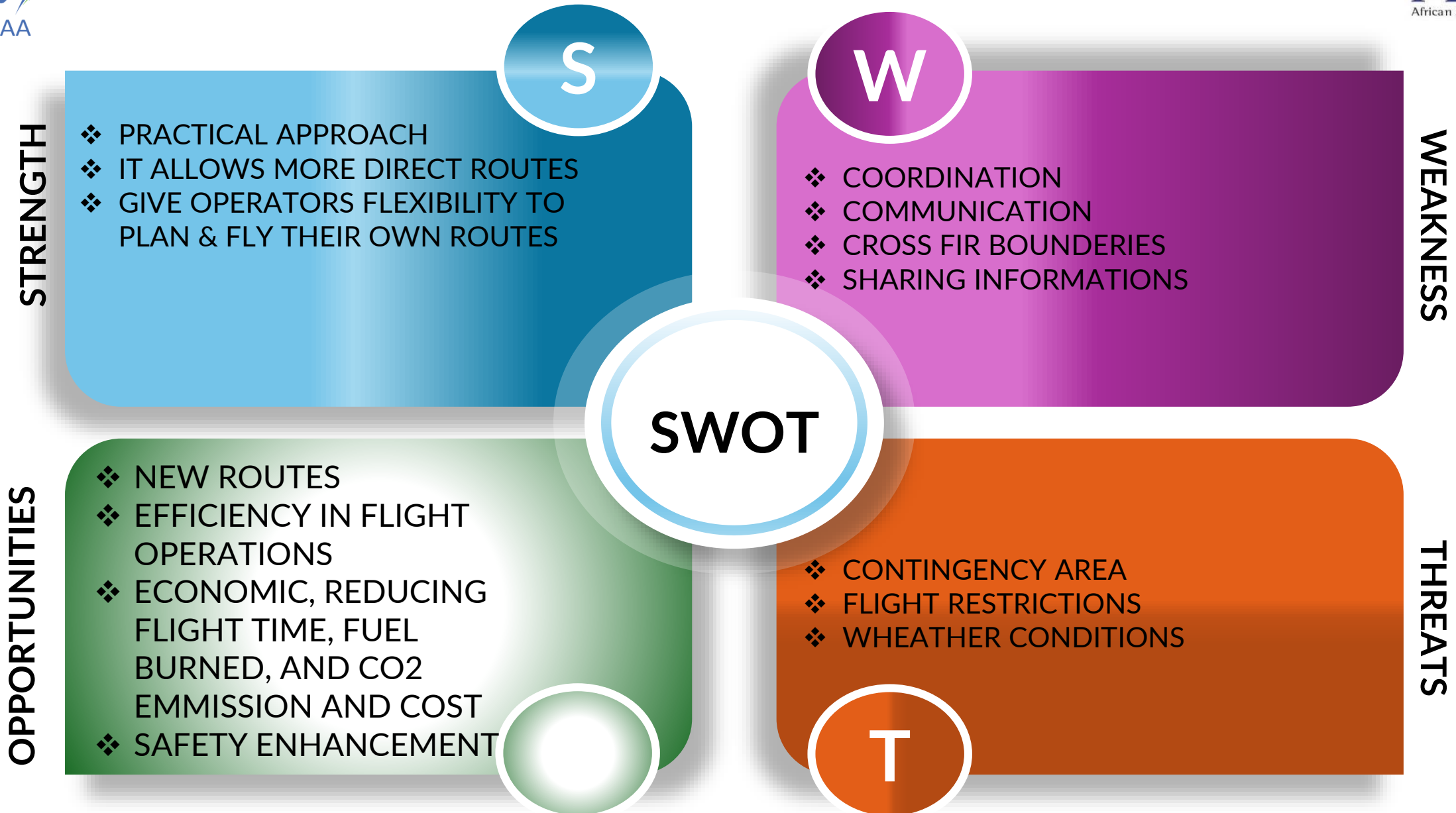
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# UPR/FRA CYCLE

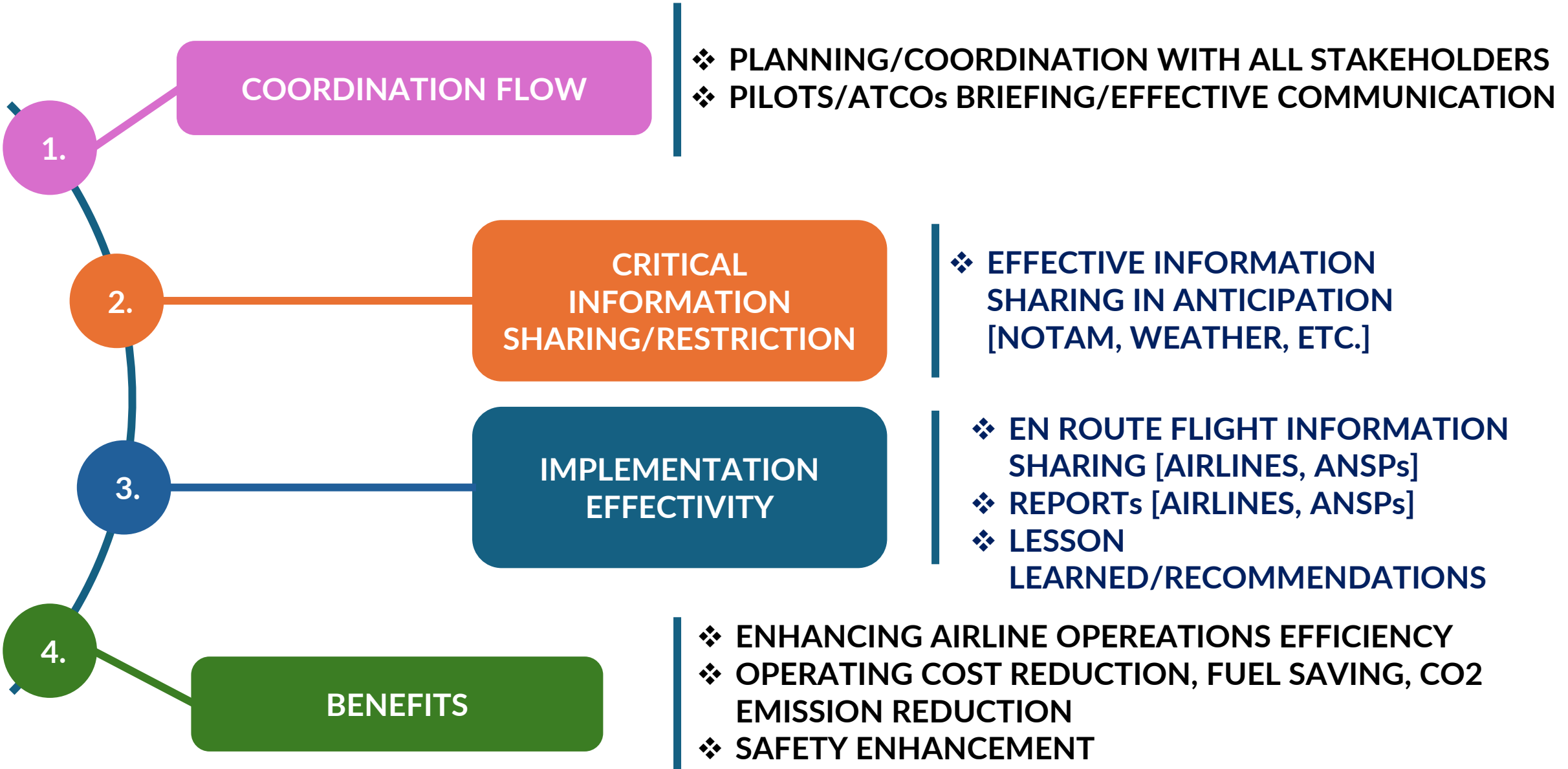


**ULTIMATE GOAL – FREE ROUTE AIRSPACE FOR AFRICA**

# SWOT ANALYSIS UPR/FRA



# DISCUSSIONS UPR/FRA



# SOME OUTCOMES EAST-WEST-EAST

The outcomes of the Trial are successful, and the following have been observed:  
Some figures with the participant airlines are based on the savings realized and extended to one-year trial implementation.

## ETHIOPIAN AIRLINES ETH935 [ADD-ABJ] & ETH934 [ABJ-ADD]



**NOTE: AVERAGE FLIGHT TIME REDUCTION ~ 5 MINUTES PER FLIGHT LEG**



# SOME OUTCOMES EAST-SOUTH-EAST

The outcomes of the Trial are successful, and the following have been observed:  
Some figures with the participant airlines are based on the savings realized and extended to one-year trial implementation.

KENYA AIRWAYS KQA784 [NBO-CAPT] & KQA785 [CAPT-NBO] - 03 FLIGHTS A WEEK



NOTE: AVERAGE FLIGHT TIME REDUCTION > 10 MINUTES PER FLIGHT LEG

# VOLUNTEER AIRLINES/SOME CONSTRAINTS

## Volunteer Airlines

1 Ethiopian Airlines

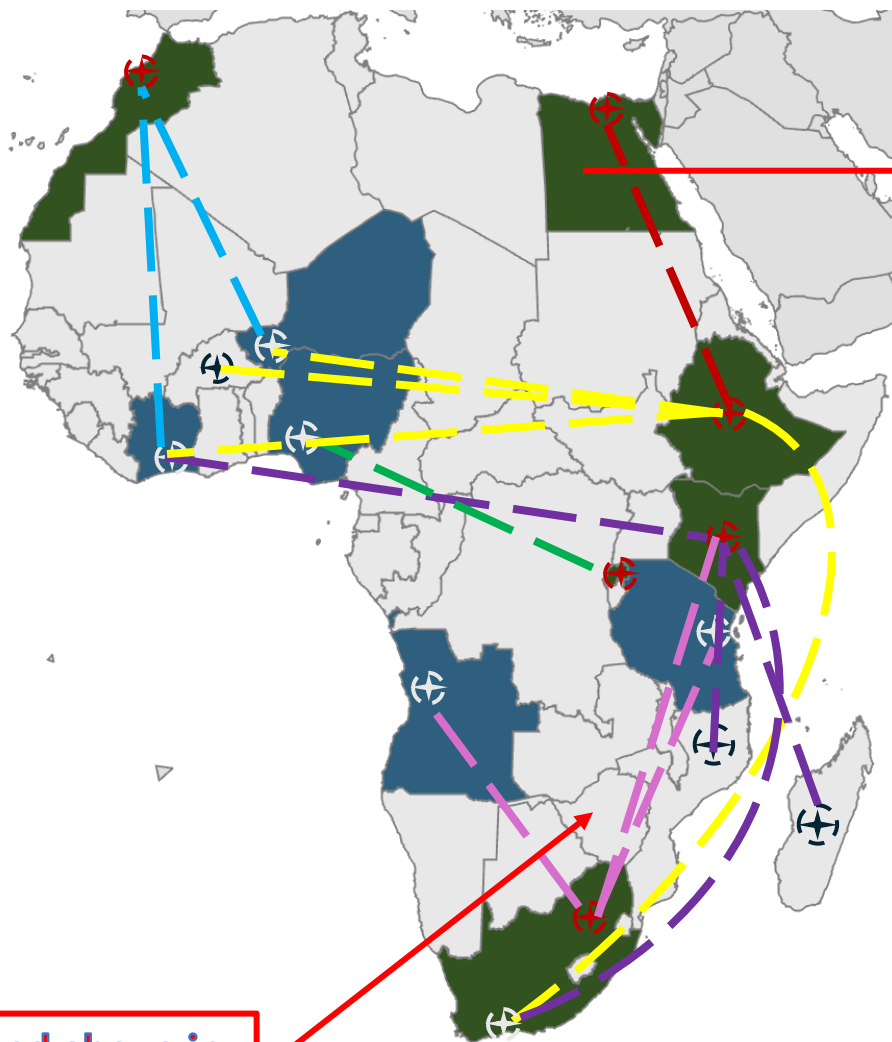
2 Kenya Airways

3 EgyptAir

4 RwandAir

5 Royal Air Maroc

6 Airlink



Restriction to FL400 and above in  
Zimbabwe Airspace

### EGYPTAIR [CAI - ADD]

- ❖ Overfly charges of Sudan via the opened eastern portion ALEBA-TOKRA (Total overfly costs increase by about 2200 USD). To avoid EgyptAir flying a longer distance “8 minutes, 75 nm” over Saudi Arabia.
- ❖ Maximum direct distance Limitation in some AIPs - 10 UTA of ASECNA, have published, “The maximum permissible length of a direct segment is 200 NM between two significant points. If this problem is fixed, the time saving is a minimum 10 minutes



# ACTIONS BY THE MEETING

## INTERNATIONAL CIVIL AVIATION ORGANIZATION

### Seventh Meeting of the APIRG Airspace and Aerodrome Operations Sub-Group (AAO/SG7)

Nairobi, Kenya, 12 - 16 August 2024.

#### Agenda Item 3: Achievements in Airspace and Aerodrome Operations

#### 3.xx USER PREFERRED ROUTES (UPR) TRIALS TO SUPPORT FREE ROUTE AIRSPACE IMPLEMENTATION IN THE CONTINENTAL AFI AIRSPACE

(Presented by AFRAA)

#### SUMMARY

The APIRG/26 Conclusion 26/09, passed in Cotonou, Benin, in 2023, encourages States, ANSPs, and the African Aviation Industry Group (AAIG) to continue conducting user preferred routes (UPR) trials and collecting critical operational data to support the implementation of the AFI free route airspace (FRA) Project in collaboration with the AFI FRA PMT.

Implementing user-preferred routes through trial flights has demonstrated that ANSPs and airline coordination safely brings significant benefits to flight operations across various FIRs for the participating airlines, including reduced fuel burned and avoided CO<sub>2</sub> emissions.

This paper presents the report of the work carried out by the African Aviation Industry Group (AAIG) on the UPR trials conducted in the AFI continent airspace since APIRG/26.

#### Action by Meeting

The Action by the meeting is as per paragraph 3 of this paper.

1

Note the informations contained in this working paper

2

Recommend avenues for removing flight-level restrictions during the trials for effective FRA implementation in AFI.

3

Provide input to enhance the UPR/FRA trial flight implementation.

THANK  
YOU



*Better Skies for Africa*