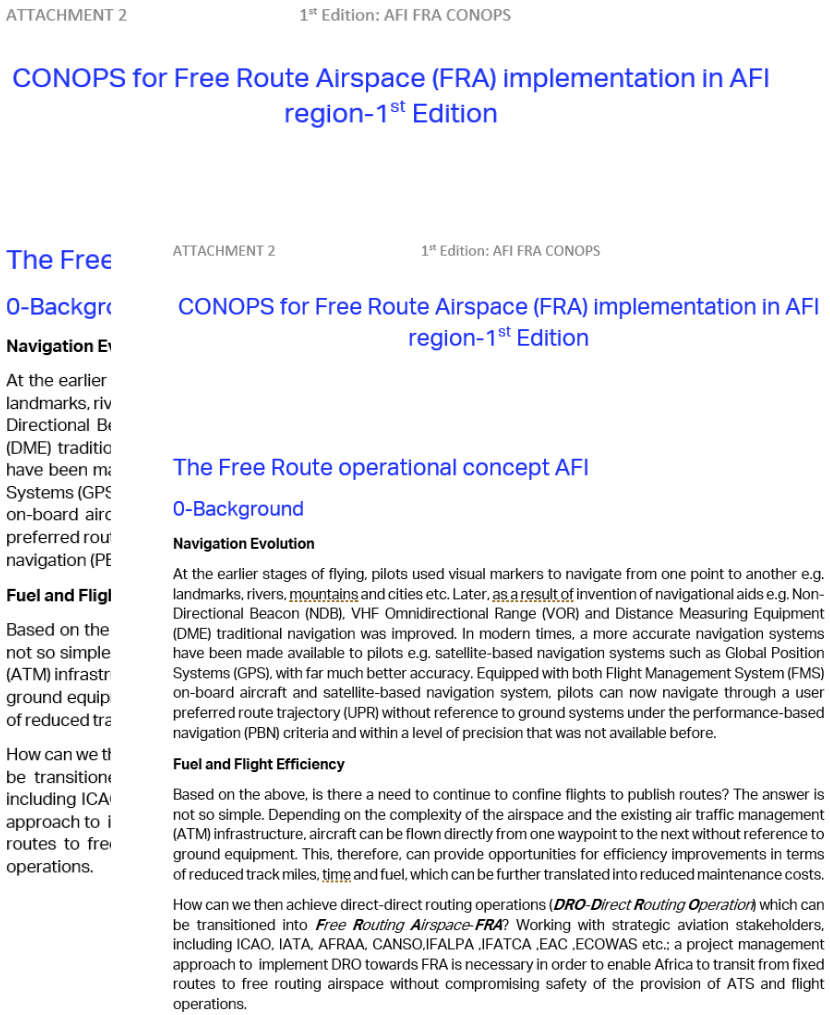
AFI FRA CONOPS –UPDATE

AFI FRA CONOPS : Achievements to date



ATTACHMENT 2 1st Edition: AFI FRA CONOPS

CONOPS for Free Route Airspace (FRA) implementation in AFI region-1st Edition

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The Free Route operational concept AFI

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Navigation Evolution

At the earlier stages of flying, pilots used visual markers to navigate from one point to another e.g. landmarks, rivers, mountains and cities etc. Later, as a result of invention of navigational aids e.g. Non-Directional Beacon (NDB), VHF Omnidirectional Range (VOR) and Distance Measuring Equipment (DME) traditional navigation was improved. In modern times, a more accurate navigation systems have been made available to pilots e.g. satellite-based navigation systems such as Global Position Systems (GPS), with far much better accuracy. Equipped with both Flight Management System (FMS) on-board aircraft and satellite-based navigation system, pilots can now navigate through a user preferred route trajectory (UPR) without reference to ground systems under the performance-based navigation (PBN) criteria and within a level of precision that was not available before.

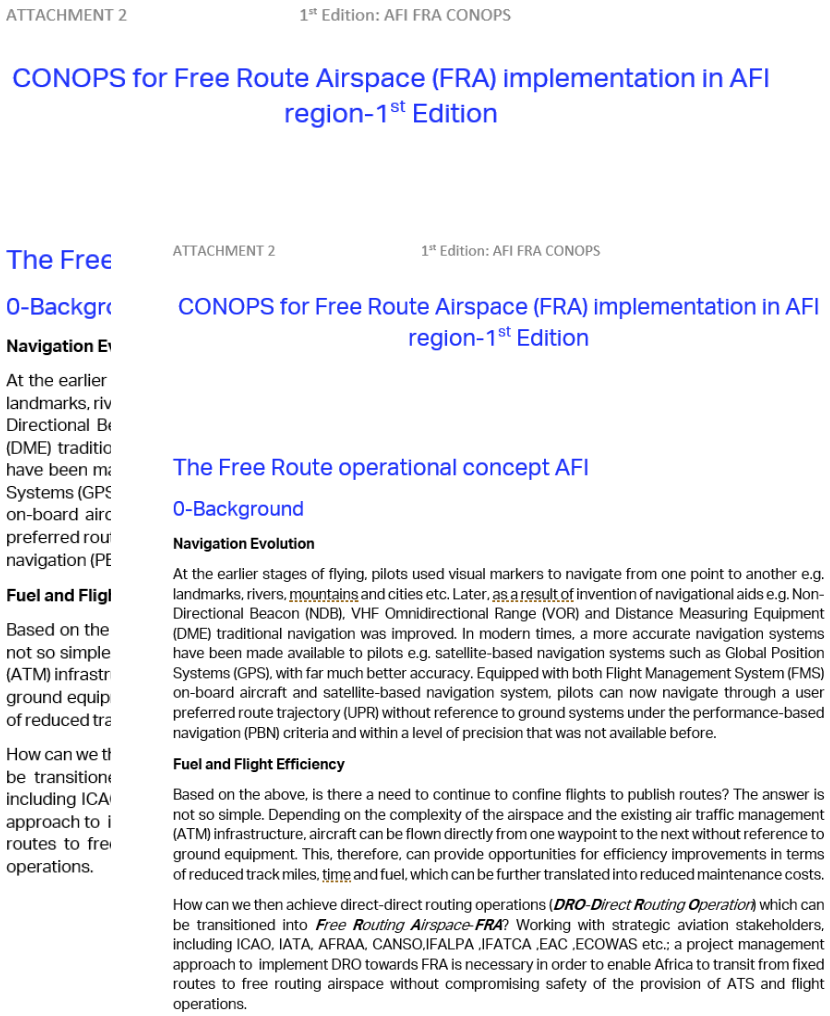
Fuel and Flight Efficiency

Based on the above, is there a need to continue to confine flights to publish routes? The answer is not so simple. Depending on the complexity of the airspace and the existing air traffic management (ATM) infrastructure, aircraft can be flown directly from one waypoint to the next without reference to ground equipment. This, therefore, can provide opportunities for efficiency improvements in terms of reduced track miles, time and fuel, which can be further translated into reduced maintenance costs.

How can we then achieve direct-direct routing operations (***DRO-D****irect* ***R****outing* ***O****peration*) which can be transitioned into ***F****ree* ***R****outing* ***A****irspace-****FRA***? Working with strategic aviation stakeholders, including ICAO, IATA, AFRAA, CANSO,IFALPA ,IFATCA ,EAC ,ECOWAS etc.; a project management approach to implement DRO towards FRA is necessary in order to enable Africa to transit from fixed routes to free routing airspace without compromising safety of the provision of ATS and flight operations.

- 1st edition -AFI FRA Concept of Operation (CONOPS) completed.

AFI FRA CONOPS : 2021 Projects



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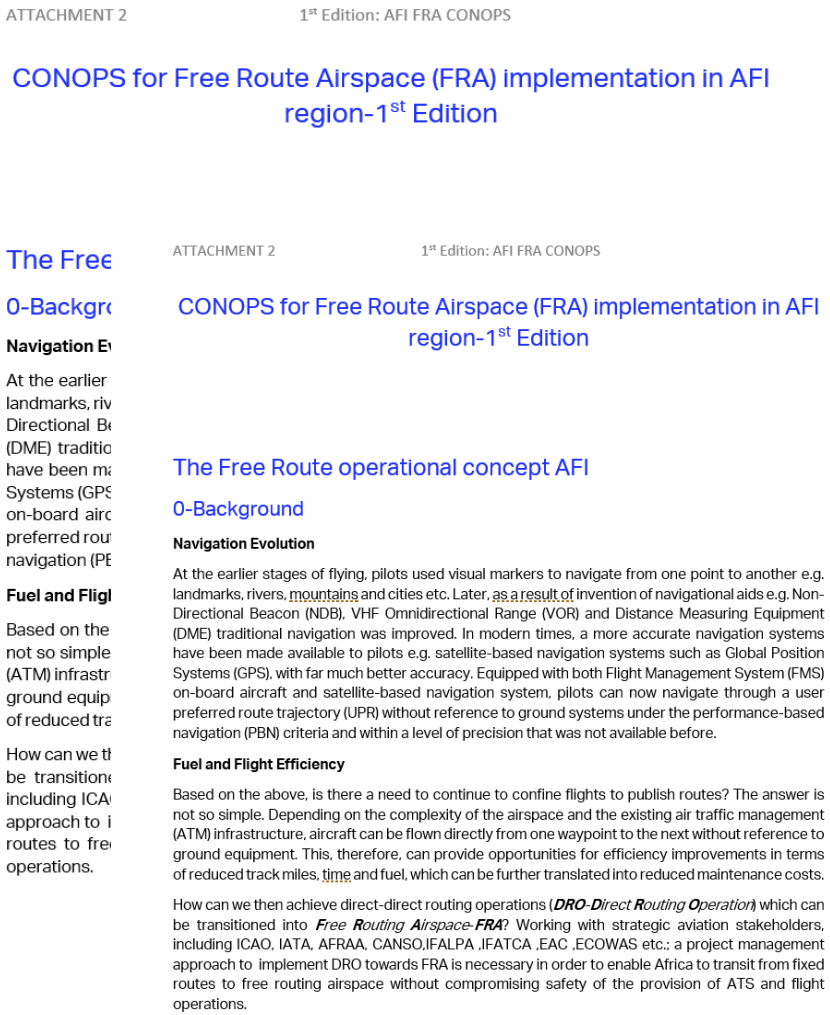
- The 2nd Edition of the AFI FRA CONOPS is expected to be released by end 2021-this amendment will focus mainly on :

1. FRA - AIP Publication – in progress

As there are many AFI States candidates which are ready to implement FRA in 2021.

AFI FRA CONOPS : 2022 Project



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- The next amendments will provide more information on the following topics :

1. Steps to consider when removing some fixed ATS routes
2. Connection between FRA upper airspace and SIDs and STARs (COO, CDO)