



Joint Meeting of the North American, Central American and Caribbean Working Group (NACC/WG) Airspace Optimization Task Force and the 4th Meeting of the NAM CAR Regional Airspace Optimization Team

P/01

Airspace Optimization Task Force

Moving Forward

Agenda Item 1

Presented by the Secretariat





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Task Force - PBN

TASK FORCE ON IMPLEMENTATION OF PERFORMANCE-BASED NAVIGATION (PBN) AIRSPACE CONCEPT

Based on the ANI/WG Terms of Reference for expediting the work progress and to focus on the regional priorities, and considering the existence of various Ad hoc Groups that were working in support of the implementation working groups, such as the ADS-B Ad hoc Group, the AMHS Implementation Group, etc., the ANI/WG/1 Meeting considered necessary to group them under the ANI/WG structure, including any other specific implementation task group, with the aim of providing continuity. In this regard, seven topics that shall be developed through Task Forces under the ANI/WG were formed.

Rapporteur: **Riaaz Mohammed**, Trinidad and Tobago.

[Terms of reference](#)

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AIRSPACE OPTIMIZATION TASK FORCE

1. **Background**

During the first ANI/WG meeting, a PBN Implementation Task Force was formed in order to streamline related air navigation implementation activities. This Task Force will carry out specific studies to support Performance-Based Navigation (PBN) implementation in the NAM/CAR Regions in accordance with the NAM/CAR RPBANIP, as well as update and report progress to the ANI/WG based on the action plan for these tasks. During the Fourth ANI/WG meeting, a decision was taken to amend the Terms of Reference with the objective of increasing the effectiveness of the PBN Task Force.

Subsequently, and following discussions held at the ANI/WG/5 meeting, Task Force Members considered that the scope of the activities undertaken should be expanded to cover the broader concept of airspace optimization. While the implementation of PBN remains a high priority, the Task Force will also pay attention to additional airspace considerations that contribute to the development of ASBU concepts such as Improved operations through enhanced en-route trajectories Free Route Operations (FRT0).

2. **Responsibilities**

2.1 The Task Force is responsible for:

- a) Developing and implementing a Work Programme to support the airspace optimization and PBN implementation in the NAM/CAR Regions according with the the CAR/SAM eANP.
- b) Continued refinement and ongoing review of the NAM/CAR PBN Implementation Plan and monitoring and reporting on its application in the Regions.
- c) Comply with and provide regional support for the completion of the GREPECAS Projects and related tasks.
- d) Propose the ANI/WG updates to the CAR/SAM eANP and GREPECAS related projects as required.
- e) Assisting States with the development of their airspace optimization plans, based on the PBN airspace concept and other related ASBU Modules periodically monitor their progress and report to the ANI/WG.
- f) Carrying out specific studies, developing guidance material and organizing workshops and seminars to assist States with Area Navigation/Required Navigation Performance (RNAV/RNP) implementation in the en-route, terminal, and approach flight phases, taking into account the PBN concept according to the ICAO Strategic Objectives and Global Plan Initiatives (GPIs).
- g) Identifying deficiencies and constraints regarding airspace utilization and PBN implementation, and propose solutions that would facilitate resolution of such problems.



2.2 The Task Force Rapporteur would be appointed through coordination between ICAO NACC Regional Office and Member States.

2.2 Responsibilities of the members:

- a) Attend the Task Force meetings and Teleconferences.
- b) Collaborate with the development and implementation of the Task Force work programme.
- c) Comply with the agreed tasks and activities as assigned.

2.3 Responsibilities of the Rapporteur

- a) Lead the development and implementation of the Task Force work programme and activities.
- b) Report on the compliance with the CAR/SAM eANP.
- c) Report to the ANI/WG the compliance with the Task Force Work Programme and CAR/SAM eANP related tasks.

2.4 Responsibilities of the Secretariat

- a) The ICAO NACC ATM/SAR Regional Officer will serve as the Secretary of the Task Force.
- b) He/she is responsible to support the Task Force activities, providing guidance to the connection for the Task Force work programme and the CAR/SAM eANP;
- c) In coordination with the Rapporteur, develop and present to the members the annual programme of activities;
- d) In coordination with the Rapporteur, convene the Task Force activities, teleconferences and meetings; and
- e) Maintain up to date the Task Force documentation, work programme and membership in the ANI/WG website information.

2.5 Responsibilities of the States

- a) Ensure commitment and active participation of its members, according to the role and responsibilities assigned.
- b) Provide resources (e.g. time/finances to attend meetings) to ensure that their representatives are able to contribute to the activities of the taskforce.
- c) Request accountability for the development and implementation of the Airspace Optimization Work Programme in the NAM/CAR Regions.
- d) Provide Points of Contact (PoCs) to the Airspace Optimization Task Force. The Taskforce will liaise with the PoCs of each State regarding the activities of the Work Programme and it is expected that the PoCs will then coordinate internally with the relevant persons within their organization.



3. Membership.

3.1 The Airspace Optimization Task Force shall be comprised of a Rapporteur and up to nine (9) members, nominated by ICAO States, Territories and International Organizations members of the ANI/WG. All members of the Task Force should have completed some form of PBN/Airspace Design training and or have experience in PBN/Airspace Design implementation.

3.2 The membership of the PBN Taskforce shall include:

i At least one (1) representative from the following:

- a) The NAM Region
- b) Central American Sub-region
- c) Central Caribbean Sub-region
- d) Eastern Caribbean Sub-region
- e) IATA
- f) CANSO

ii One (1) Procedure Designer

iii One (1) Airspace Designer



3.3 The Task Force may temporarily include other persons as required for specific tasks.

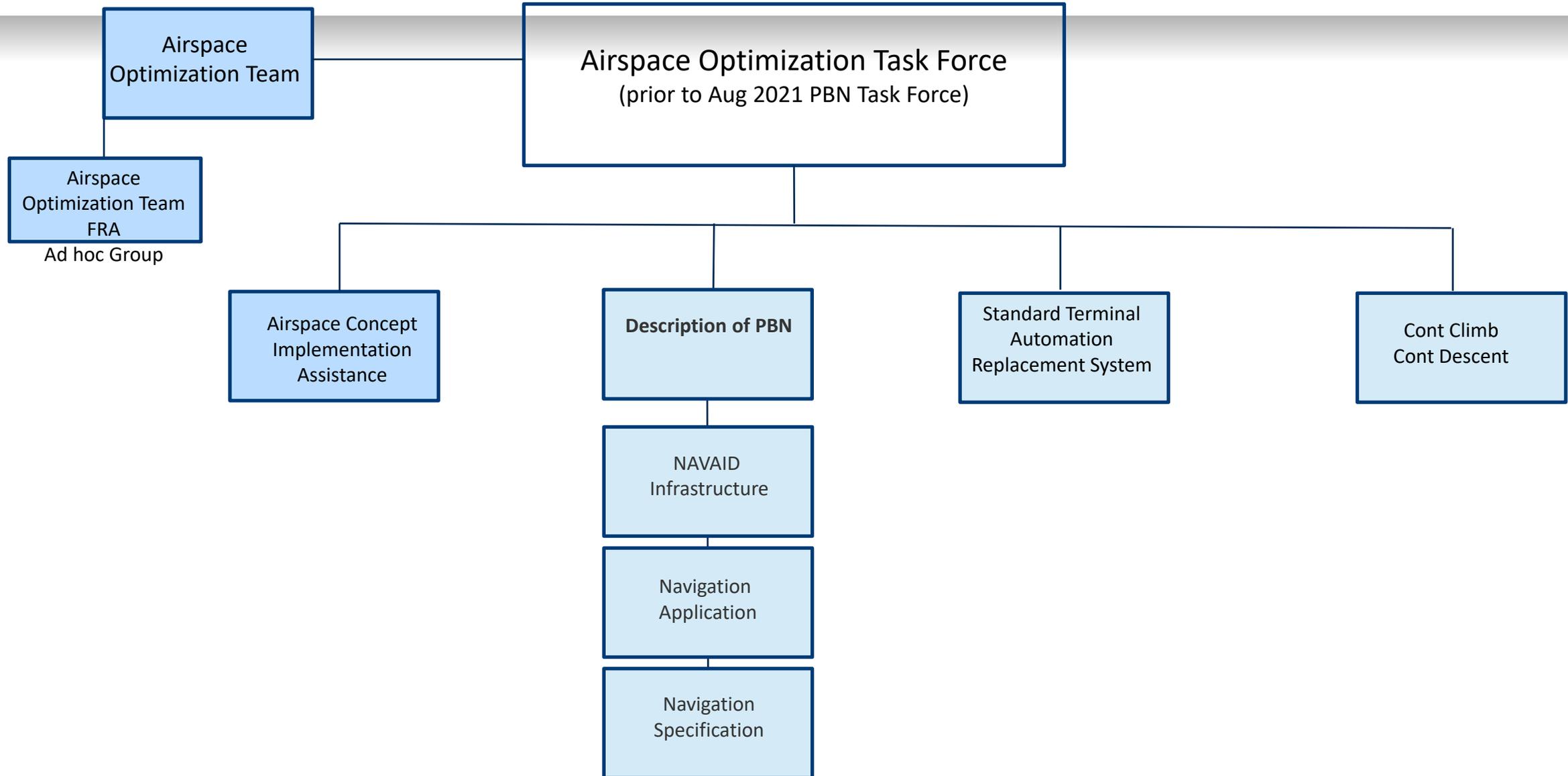
4. Working Methods

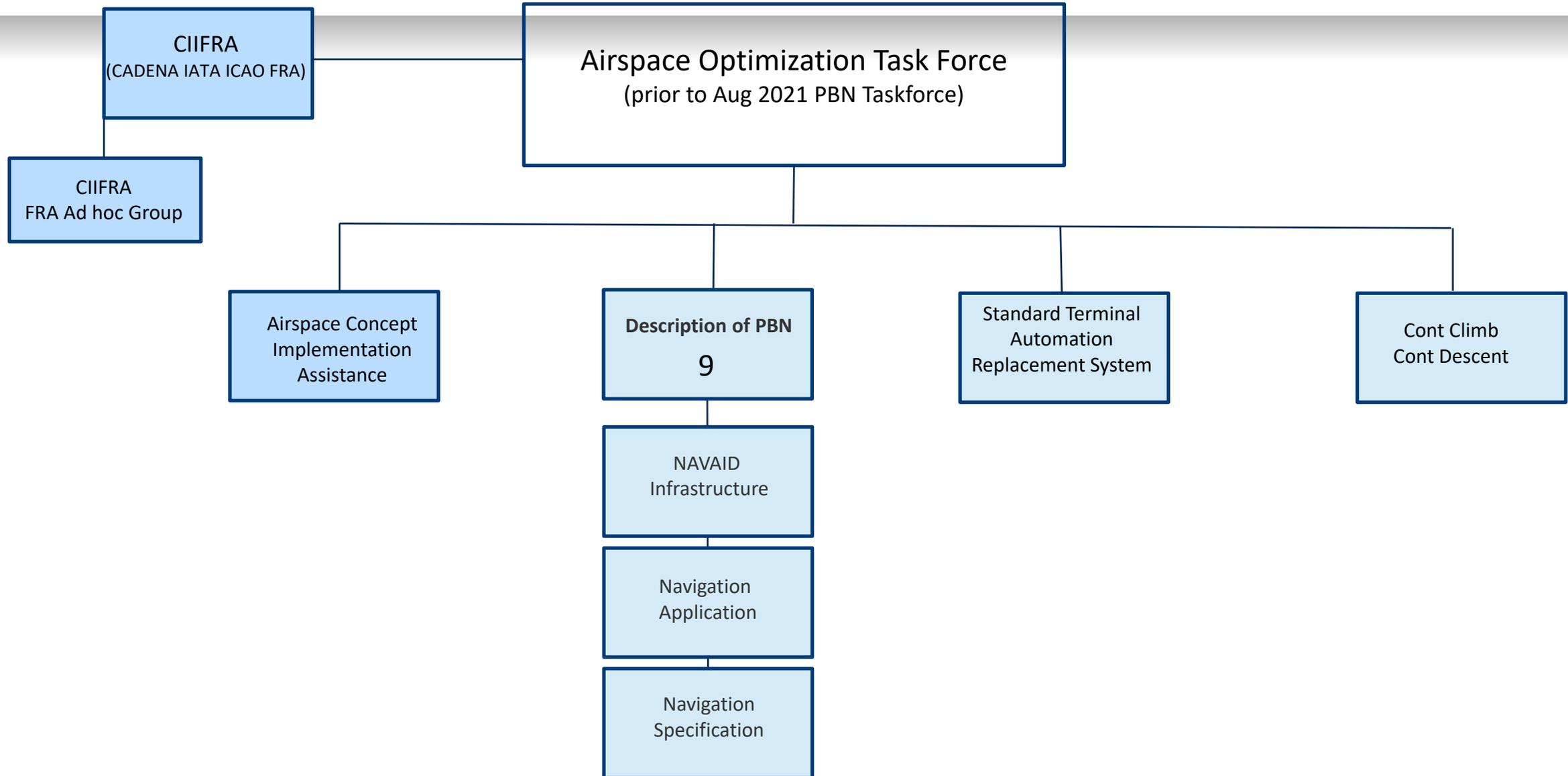
The Task Force will:

- a) Present its work programme containing activities in terms of objectives, responsibilities, deliverables and timelines.
- b) The Task Force Rapporteur and the Secretariat will coordinate an annual programme of activities to comply with the requirements of the approved work programme.
- c) Avoid duplicating work within the ANI/WG and maintain close coordination among the existing entities to optimize use of available resources and experience.
- d) Designate, as necessary, Ad hoc Groups to work on specific topics and activities and organize clearly defined tasks and activities.
- e) Coordinate tasks to maximize efficiency and reduce costs via electronic means including emails, telephone and teleconference calls, and convene meetings as necessary.
- f) Report on and coordinate the progress of assigned tasks to the ANI/WG.



ICAO CAPACITY & EFFICIENCY







Airspace Concept Implementation Assistance

refers to the discovery of requirements needed to implement optimization of the airspace. This may include infrastructure, staffing, modernization or any other hindrance to the process.



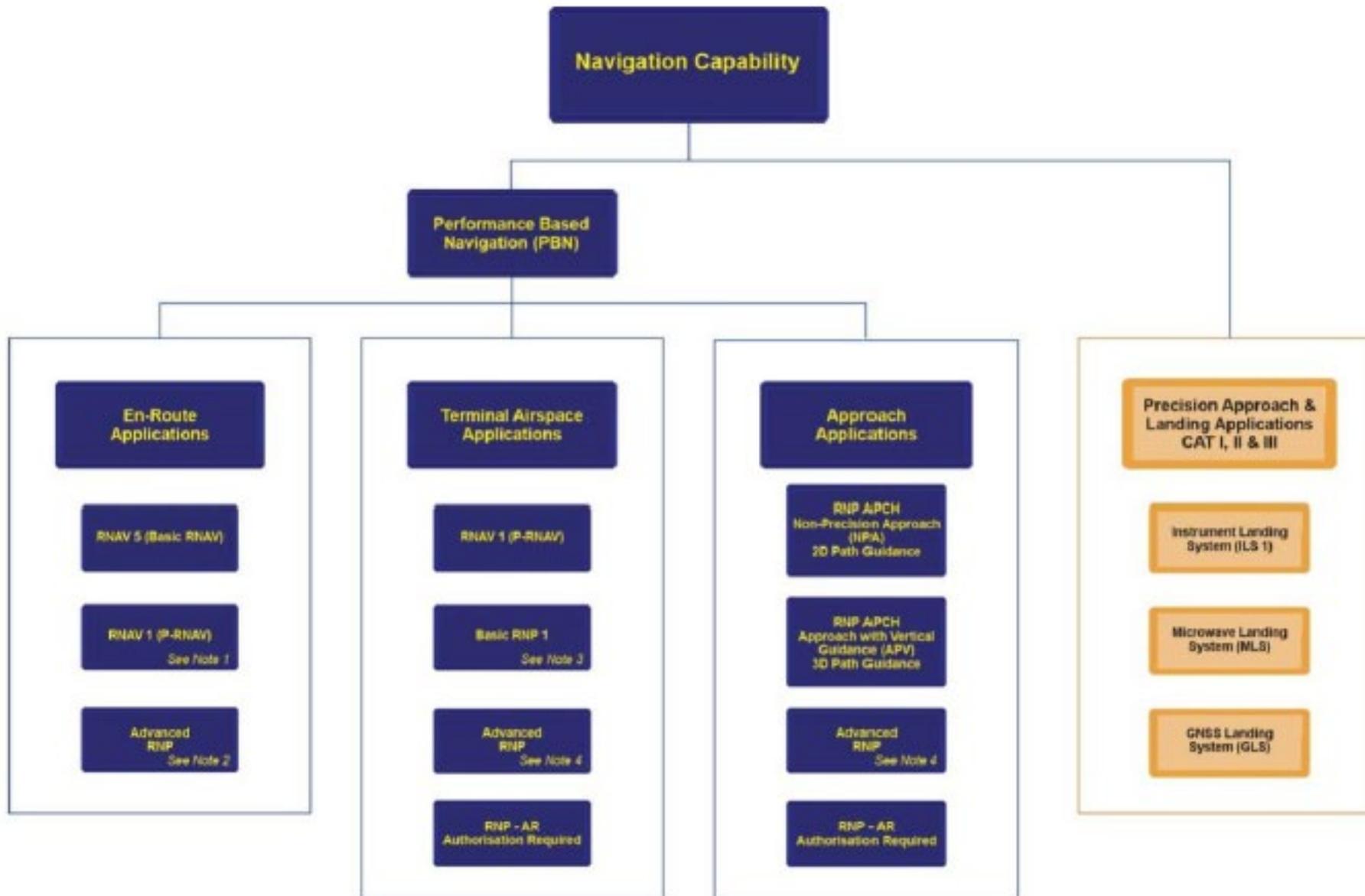
The **Navigation Specification** prescribes the performance requirements in terms of accuracy, integrity, continuity for proposed operations in a particular airspace. The Navigation Specification also describes how these performance requirements are to be achieved i.e., which navigation functionalities are required to achieve the prescribed performance. Associated with the navigation specification are requirements related to pilot knowledge and training and operational approval. A Navigation Specification is either an RNP specification or an RNAV specification. An RNP specification includes a requirement for on-board self-contained performance monitoring and alerting while an RNAV specification does not.



The **Navaid Infrastructure** relates to ground- or space-based navigation aids that are called up in each Navigation Specification. The availability of the navaid infrastructure has to be considered in order to enable the navigation application.



The **Navigation Application** refers to the application of the Navigation Specification and Navaid Infrastructure in the context of an airspace concept to ATS routes and instrument flight procedures.



The **Navigation Capability graphic** depicts the overall Navigation Capability and the relationship between the navigation specifications defined within the ICAO PBN Concept:

Note 1 Application of RNAV 1 Performance aspects, not terminal airspace functionality

Note 2 Including Fixed Radius Transition (FRT)

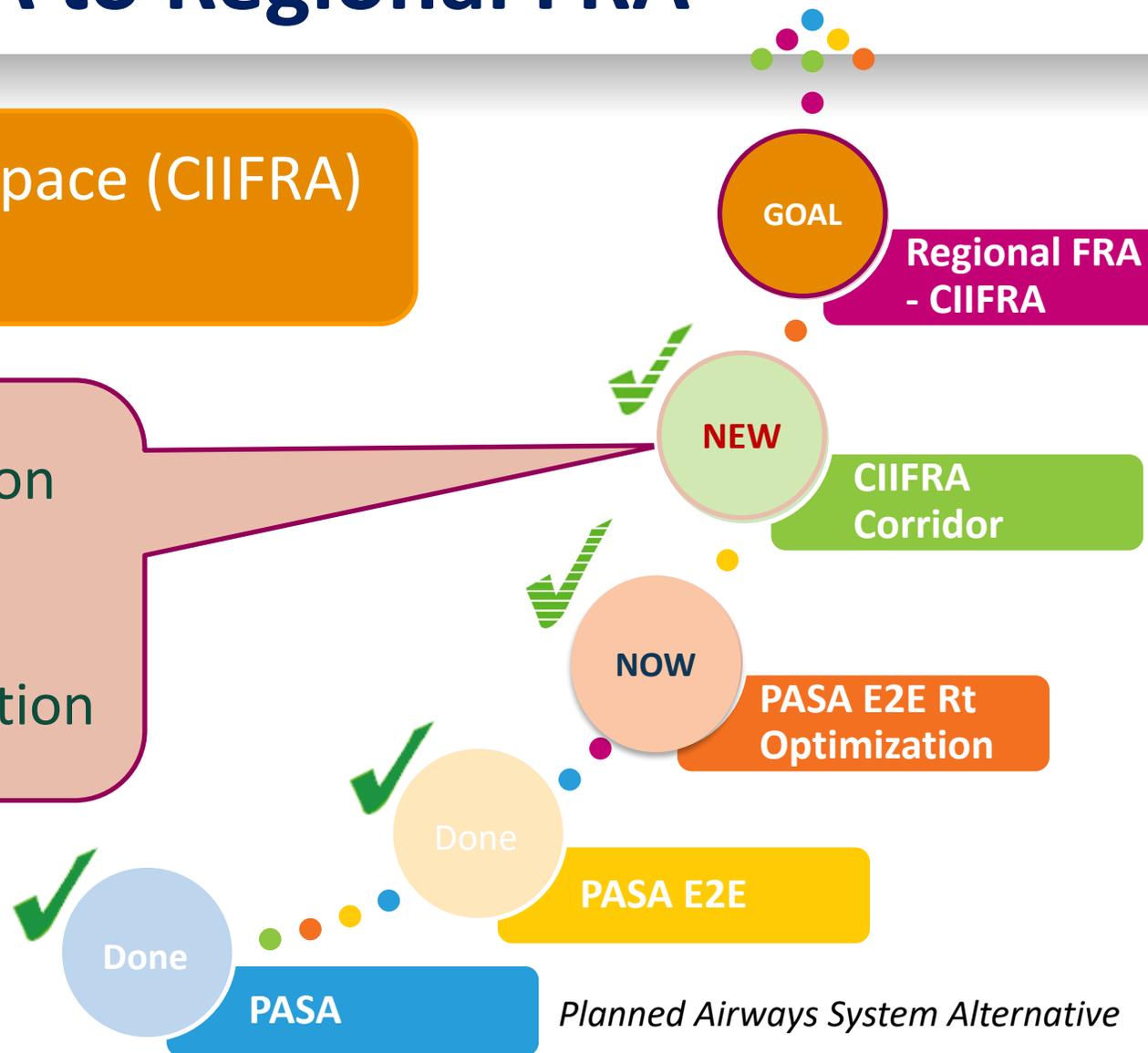
Note 3 Equivalent to RNAV 1 + GNSS, typically associated with Radius to Fix (RF)

Note 4 Including Radius to Fix (RF)

Step-by-Step: From PASA to Regional FRA

CANSO IATA ICAO Free Route Airspace (CIIFRA)
for Latin America Regional FRA

- Approaches of FRA Implementation
- Formation of Focus Team
- Selection of the 1st CIIFRA Trial
- CIIFRA Trial Plan and Implementation





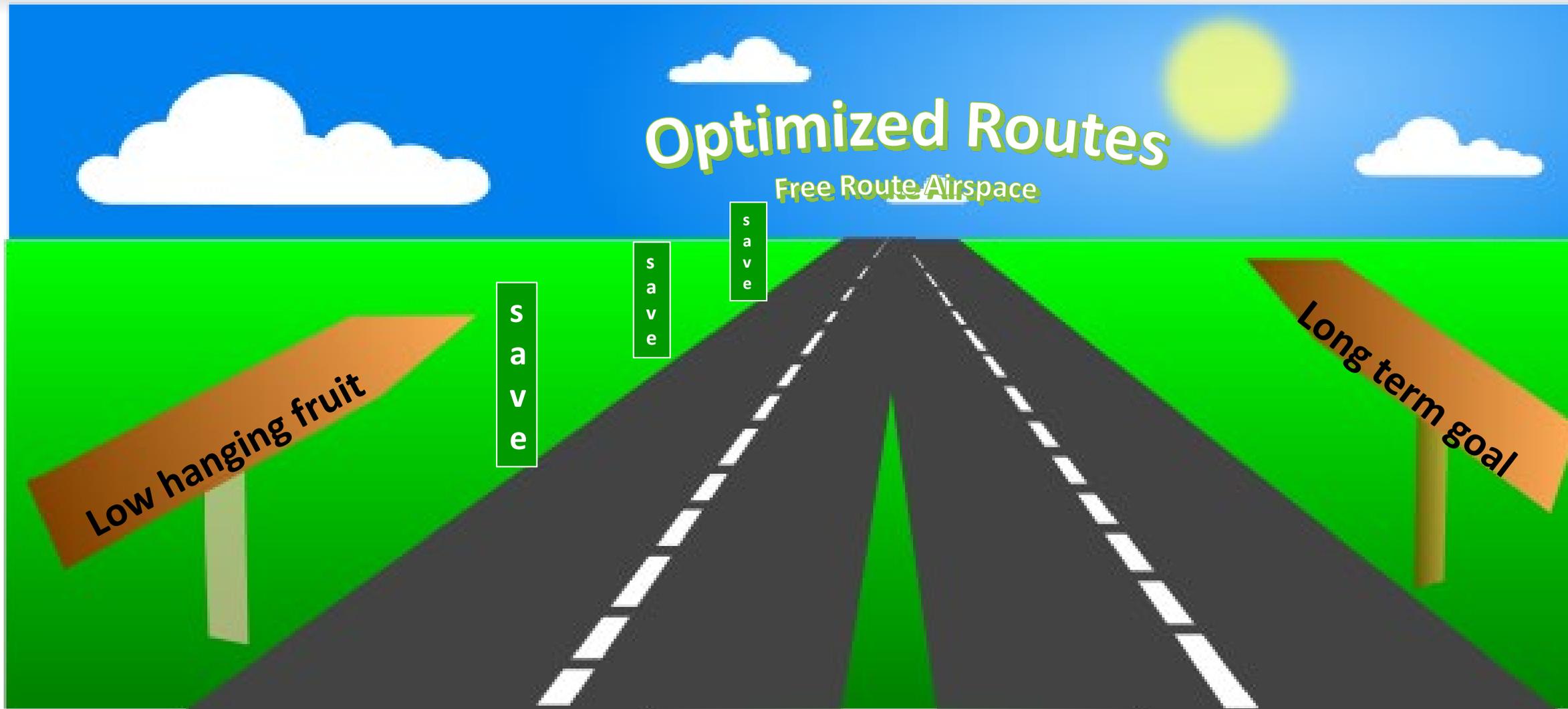


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We are happy to report that there are 4 optimized routes that have been extended to fall 2022 and another 2 currently in 90 day trial. There are another 3 optimized routes in the process for approval.

On the 6 routes that are being utilized:

13,126 minutes flying time saved/year

2,583,088 lbs of fuel saved/year

3,702,477 Kg Co2 saved/year

2,107,410 USD saved/year

4,398 flights impacted/year

*estimates based on current savings projected to 1 year



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THANK YOU!