

Taller PANS OPS 4

21TH – 25TH October 2019



25 October 2019



FREE ROUTE AIRSPACE

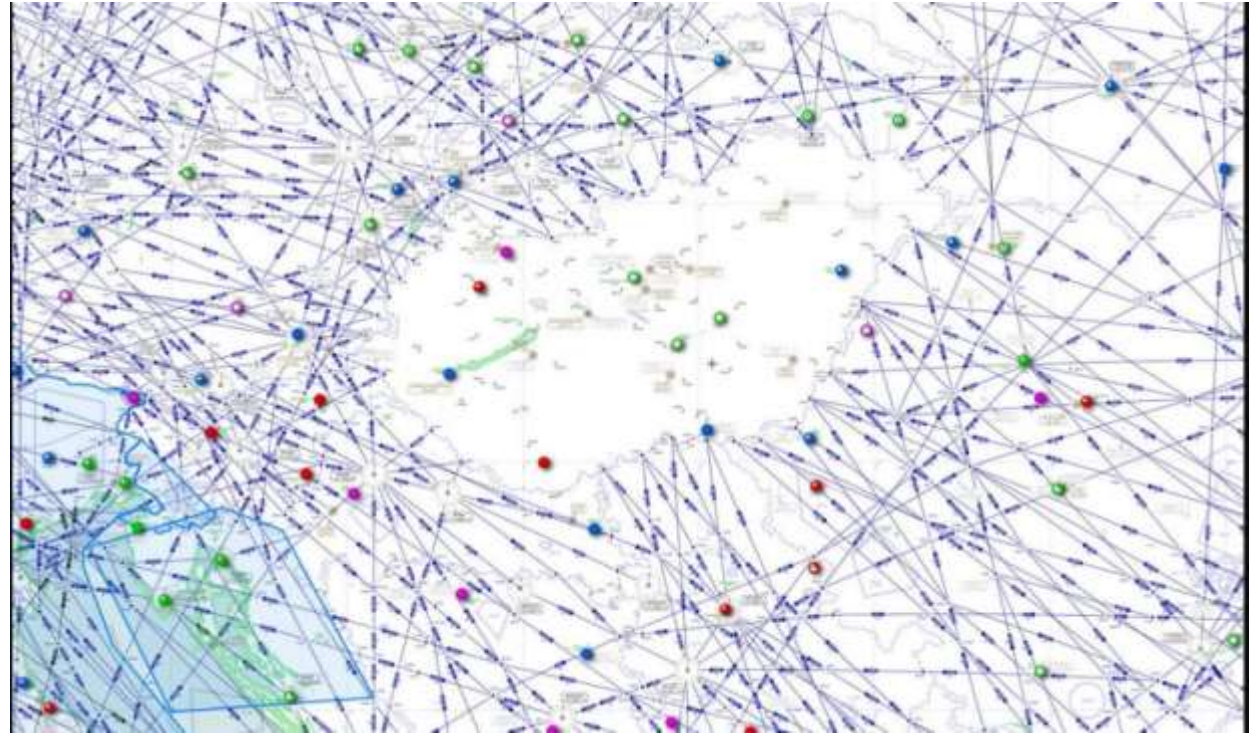
25 October 2019



Overview

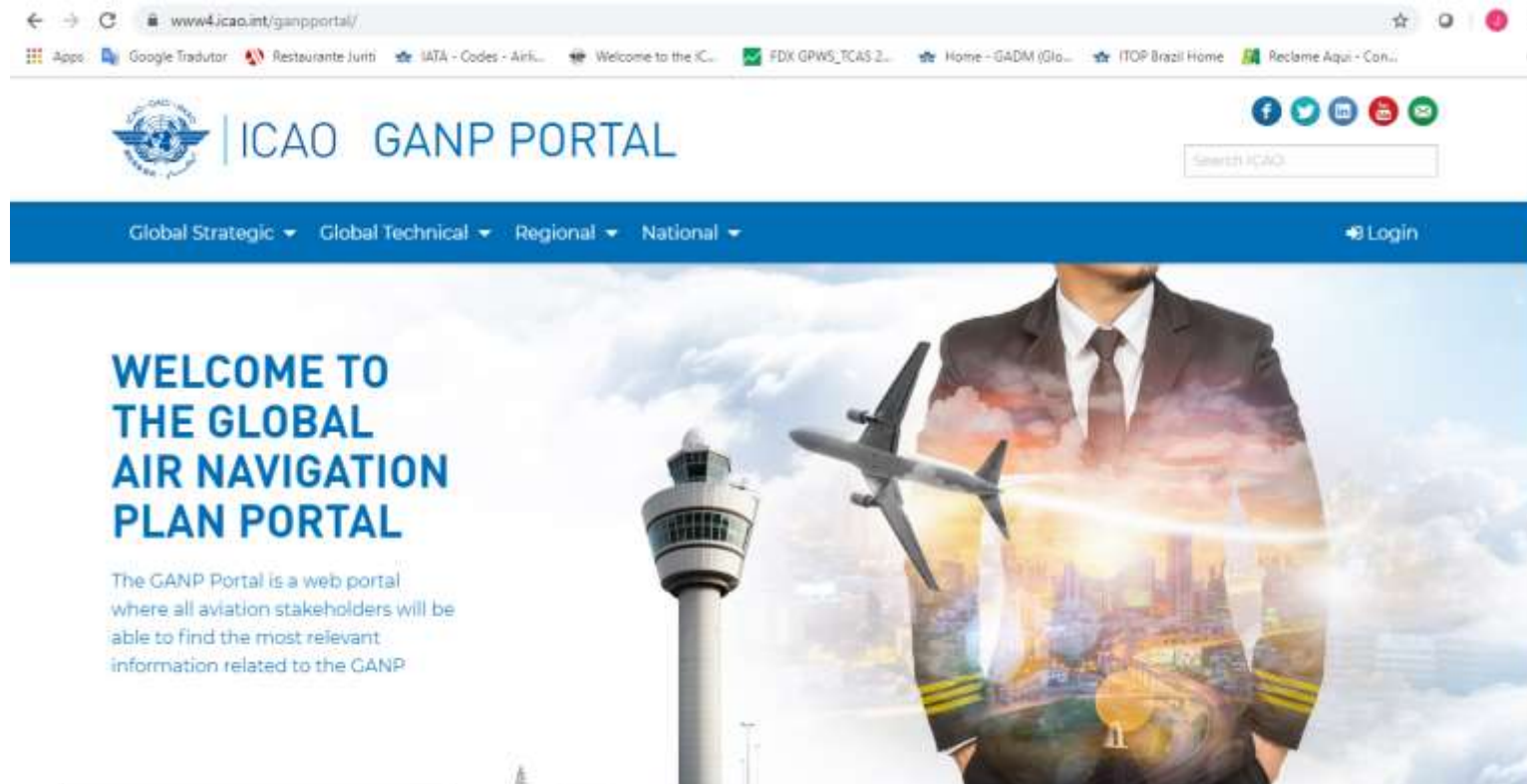


- Aviation System Block Upgrades – ASBU
 - FRTO-B0/1 Direct routing (DCT)
 - FRTO-B1/1 Free Route Airspace (FRA)
- Benefits
- Operational Requirements
- Next Steps



Aviation System Block Upgrades - ASBU

<https://www4.icao.int/ganpportal/>



The screenshot shows the ICAO GANP Portal website. The browser address bar displays www4.icao.int/ganpportal/. The page header includes the ICAO logo, the text "ICAO GANP PORTAL", and a search bar. A navigation menu below the header lists "Global Strategic", "Global Technical", "Regional", and "National", along with a "Login" button. The main content area features a large image of a man in a suit with a cityscape and an airplane overlaid on his torso. To the left of this image, the text reads: "WELCOME TO THE GLOBAL AIR NAVIGATION PLAN PORTAL". Below this, a paragraph states: "The GANP Portal is a web portal where all aviation stakeholders will be able to find the most relevant information related to the GANP".

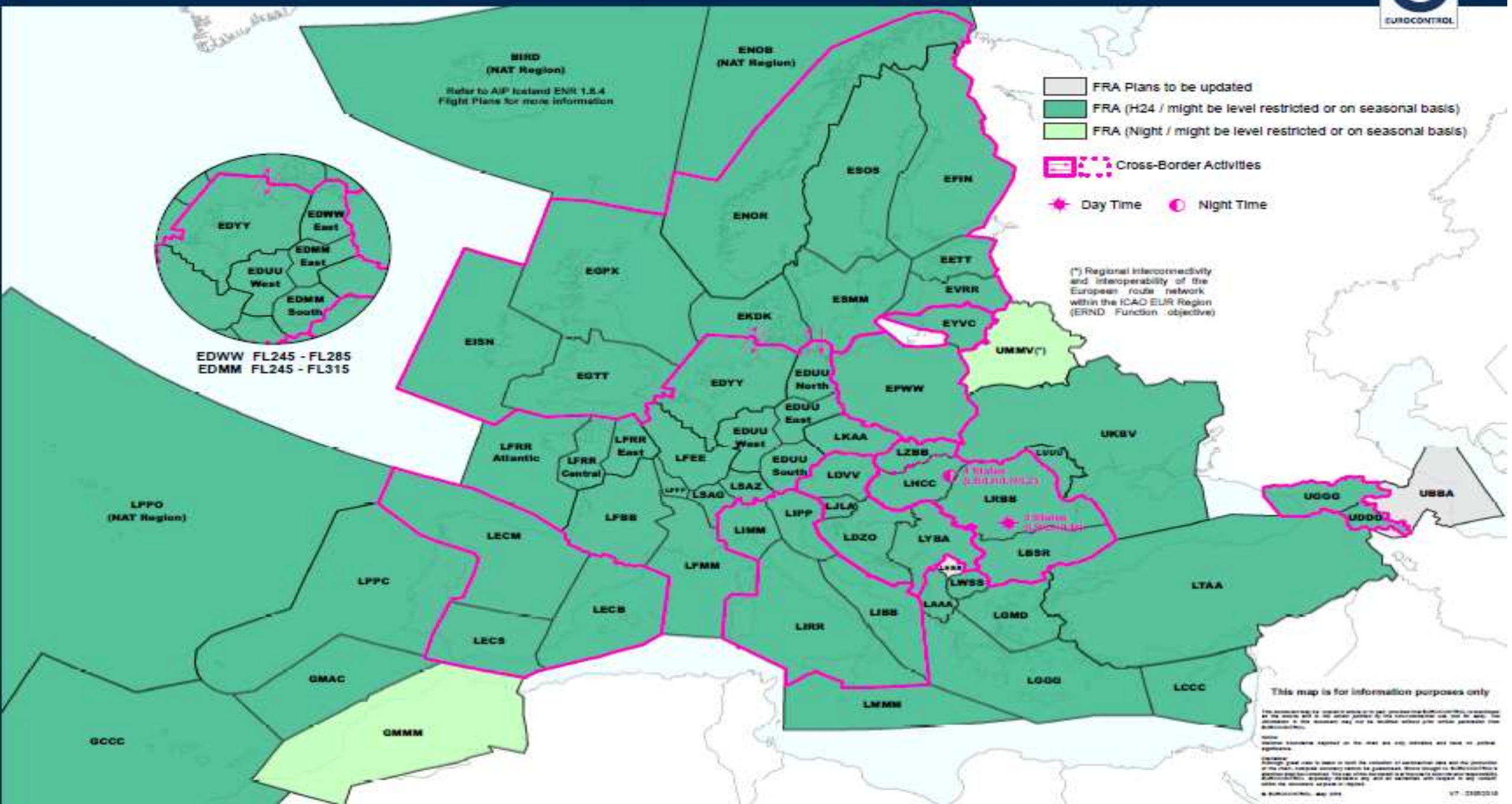
BENEFITS

25 October 2019





Free Route Airspace Implementation - End 2024



- FRA Plans to be updated
- FRA (H24 / might be level restricted or on seasonal basis)
- FRA (Night / might be level restricted or on seasonal basis)
- Cross-Border Activities
- Day Time
- Night Time



EDWW FL245 - FL285
EDMM FL245 - FL315

(*) Regional interoperability and interoperability of the European route network within the ICAD EUR Region (ERND Function objective)

This map is for information purposes only

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- **Route Development
(Colombia)**

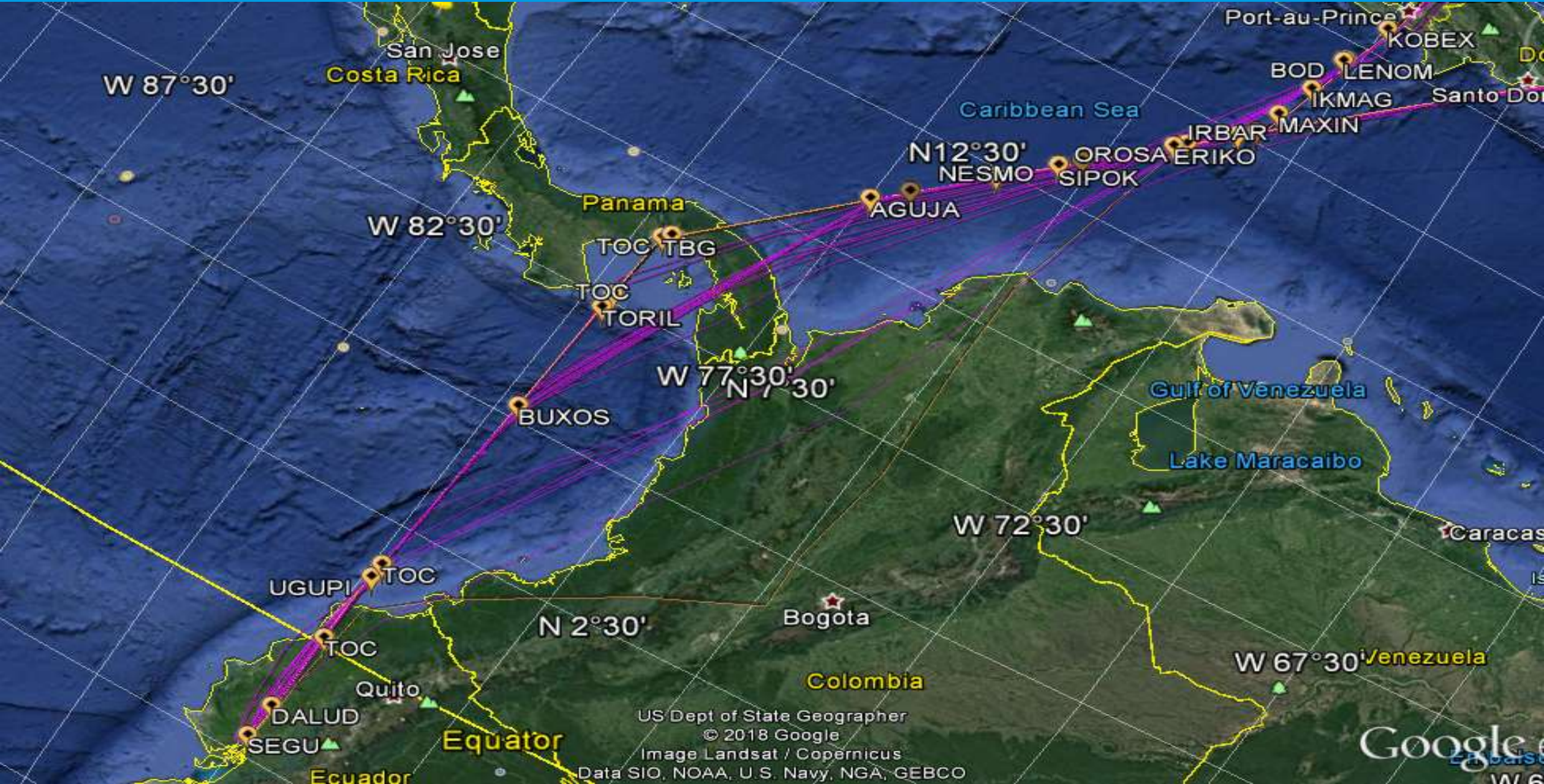
Results 2018

Rocco Heesters
Flight Support Manager Americas

Royal Dutch Airlines



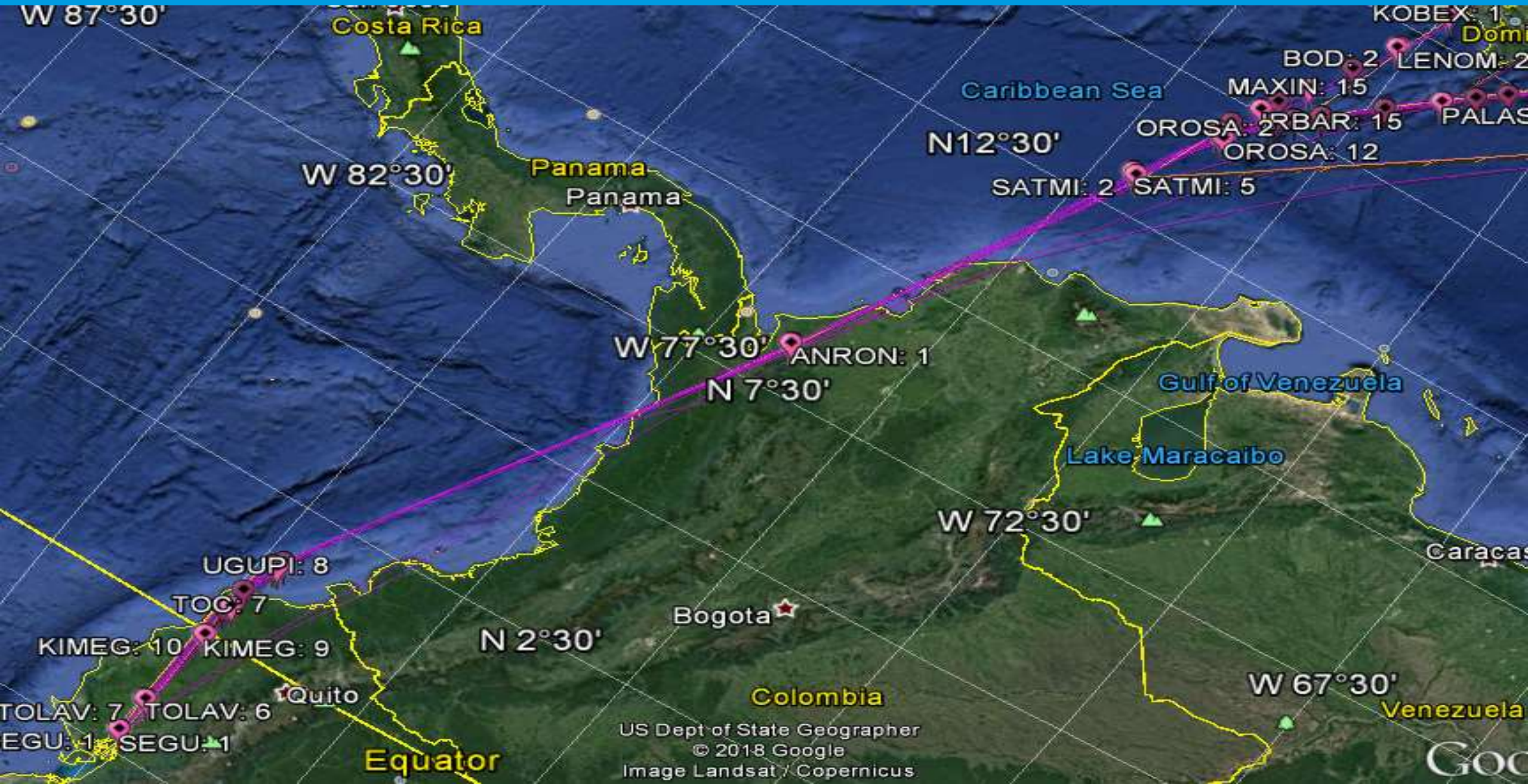
Planned routes before route development initiatives:



● **Planned vs Actual GYE-AMS**

- 30% of the flights a DCT was given between UGUPI-OROSA.
45% of the flights a DCT was given between BUXOS-AGUJA
25% of the flights the actual filed route had to be used.
- Initial calculations showed a significant fuel and CO2 saving if we could plan what we tactically get.
- A visit with IATA was made to the authorities where our route proposal was presented.

Current planned routes as a result of route development initiatives:



- **Actual Savings Colombian DCT`s 2018**

- | | Fuel savings in Kilograms | CO2 savings in Kilograms |
|-----------------------|---------------------------|--------------------------|
| <u>Yearly savings</u> | <u>269.524</u> | <u>851.000</u> |



PLAN DE VUELO

```
***** KLM751_SEGU_190611_2340_EHAM  
FPL/11-06-19 18:43:29  
FDP7374 111843  
FF SKED2Q2Q  
111843 EHAMKLMF  
(FPL - KLM751 - IS  
-B772/H- SDE2E3FGHIJ3J5P2RWXY/LB1D1  
-SE6U2340
```

```
-N0467F240 DCT1 VULKY G437 ESV/N0508F320 UR564 TCO/N0504F330 DCT  
RNG DCT UGALU DCT ELB DCT RHC DCT AMBAS/M085F330 DCT  
SCAPA/M085F350 DCT DAWIN DCT KAVAX DCT 27N056W 32N050W  
39N040W/M085F370 44N030W 47N020W 48N015W/M085F390 DCT OMOKO DCT  
GUNSO DCT GAPLI/N0500F390 M197 REDFA  
-EHAM110 EHRD
```



TCO DCT RNG DCT ELB DCT RHC DCT AMBAS

FIR SKED/SKEC = 814 NM VS RED DE RUTAS = 877



DIRECT FLIGHTS

DIRECT	FUEL SAVINGS IN KILOGRAMS					CO2 SAVINGS IN KILOGRAMS				
	JAN	FEB	MAR	APR	MAY	JAN	FEB	MAR	APR	MAY
BAQ-BUTAL-BOKAN	474	904	2268	2130	226	1.333	2.847	7.144	6.688	7.119
ANGEL-AMBAS	20000	21070	19711	21011	20000	63.052	66.371	62.09	65.974	63.000
ENPUT-LOBUL	2000	2314	1068	1544	6468	6.307	7.29	3.364	4.848	13.967
Total	22474	24288	23047	24685	26694	70.692	76.508	72.598	77.51	84.086
ESTIMATED YEARLY	288.000					876.000				

FUENTE: KLM COMPANY /SR. ROCCO: FLIGHT TACTICAL SERVICES

Operational Requirements

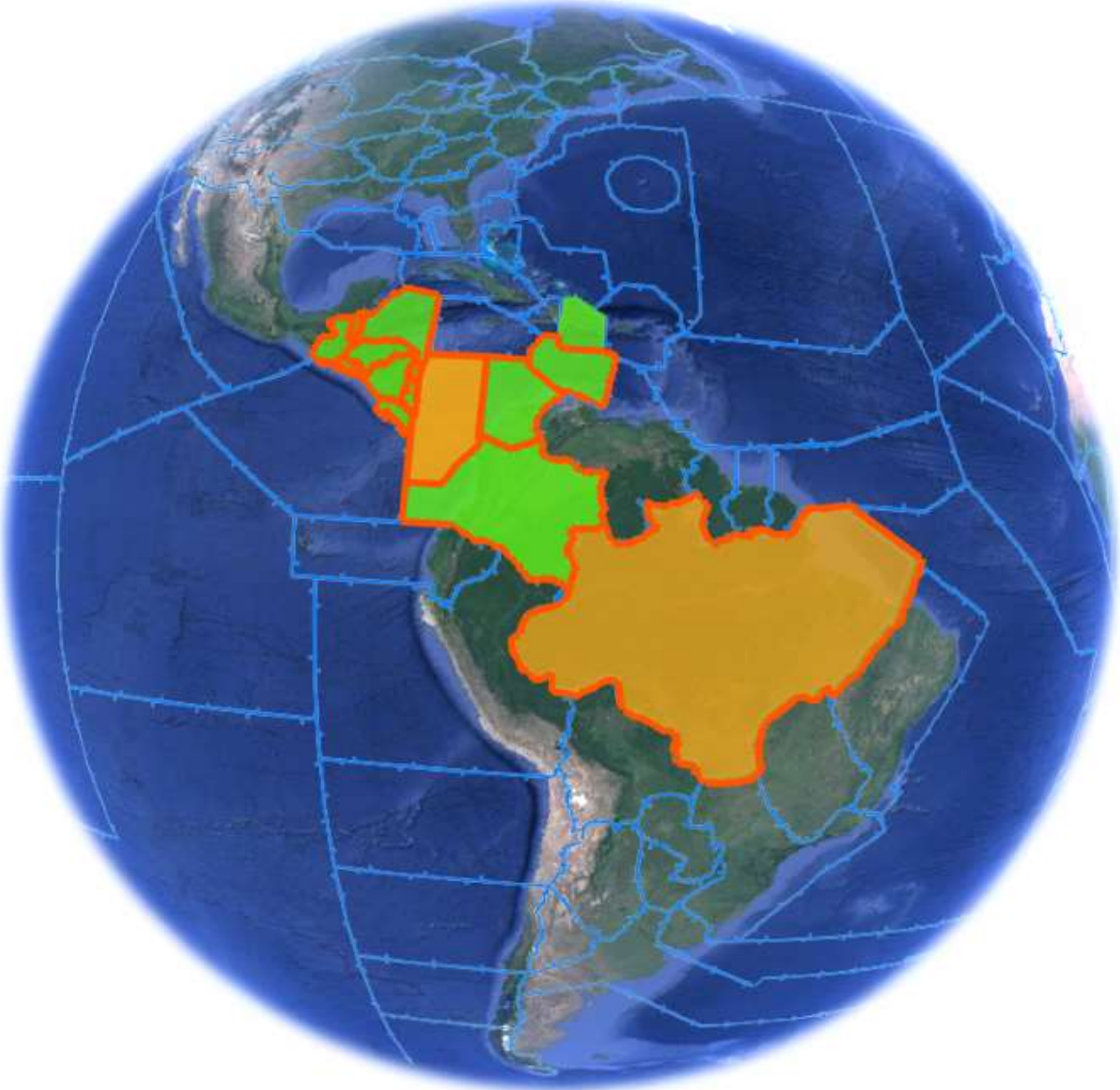
- ✓ Medium Term Conflict Detection (MTCDD)
- ✓ "Advanced" Flight Data Processing System – LAT/LONG
- ✓ ATS surveillance systems in the airspace where intend to perform DCT or FRA



Implementation

- a) Publication of the 'Free Route Airspace Concept, Requirements and Restrictions' in the AIP.
- b) Trial period can be considered for evaluation
- c) Defining the 'Area of Applicability' and its lateral dimensions
- d) Validate that the involved ATM systems can process FPLs with LAT/LONG WPT's in FIRs boundaries not predefined on the databases.
- e) Compulsory Connecting Routes for main departure/arrival flows
- f) ATS route network within the 'Free Route Airspace Area of Applicability' may remain initially and in parallel during a transition period, but the ultimate goal shall be to remove the fixed ATS-Route network in its entirety in the designated area.
- g) Cooperate with neighbouring/adjacent Free Route Airspaces: The larger the Free Route Airspace area – the larger the benefits

Implementation



Next Steps?

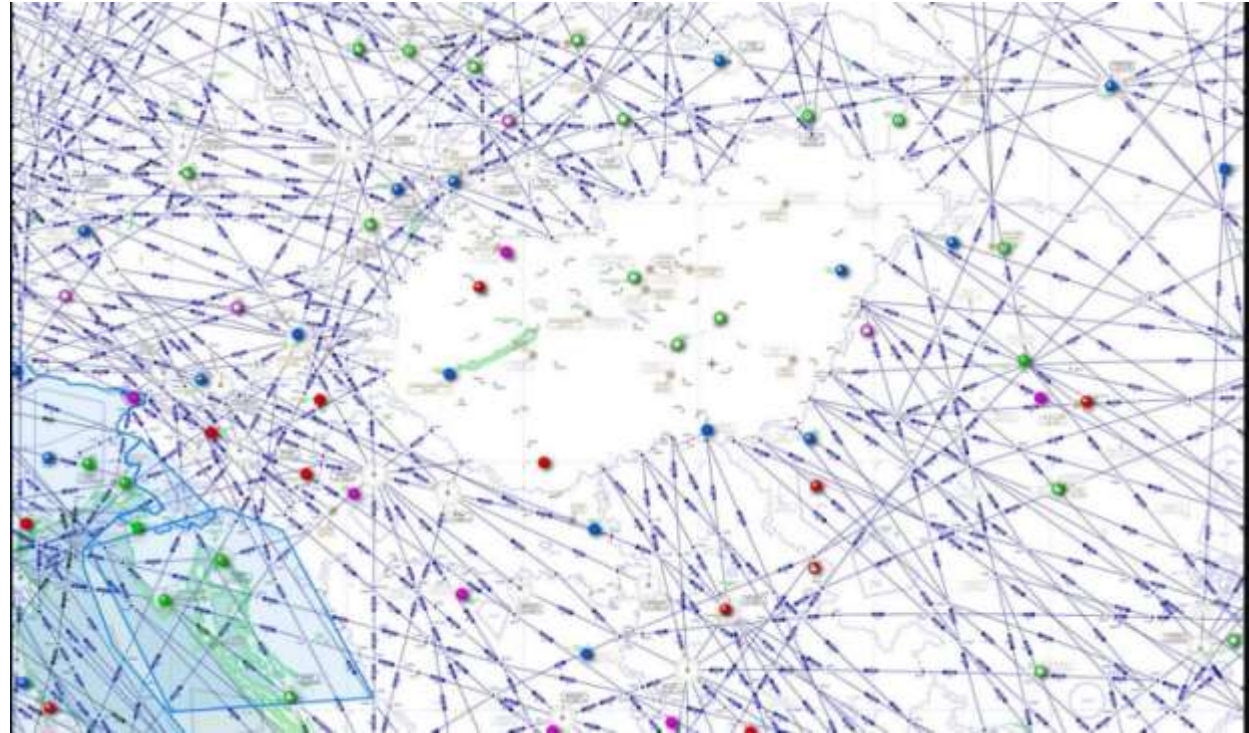
a) New CONOPS SAM

b) Implementation in Amazonica and portion of Recife FIR.

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GEPEA/SG1/GADHOC/CDM-ROTAS/12

25TH – 27TH September 2019



25 October 2019

