



# Airspace Optimization Task Force AO/TF Updates

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# Optimization

- ✈ Began with “what we have now, no investment”
- ✈ If you can't support what was requested, “What can you support?”
- ✈ Collaboration, we are all involved

# Airspace Optimization CAR Region

North American, Central American and Caribbean Working Group (NACC/WG)  
Air Space Optimization Task Force

- Working Collaboratively
- Two Pronged Attack
- Moving to Free Route Airspace
- Results



**SAFETY**

**EFFICIENCY**

**ENVIRONMENTALLY - FRIENDLY**

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- States
- CADENA
- IATA
- ICAO

Working Collaboratively - CIIFRA

CADENA IATA ICAO Free Route  
Airspace

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## Two Pronged Attack

- End to End route Optimization
- User Preferred Route
- Free Route Airspace



# Airspace Optimization CAR Region

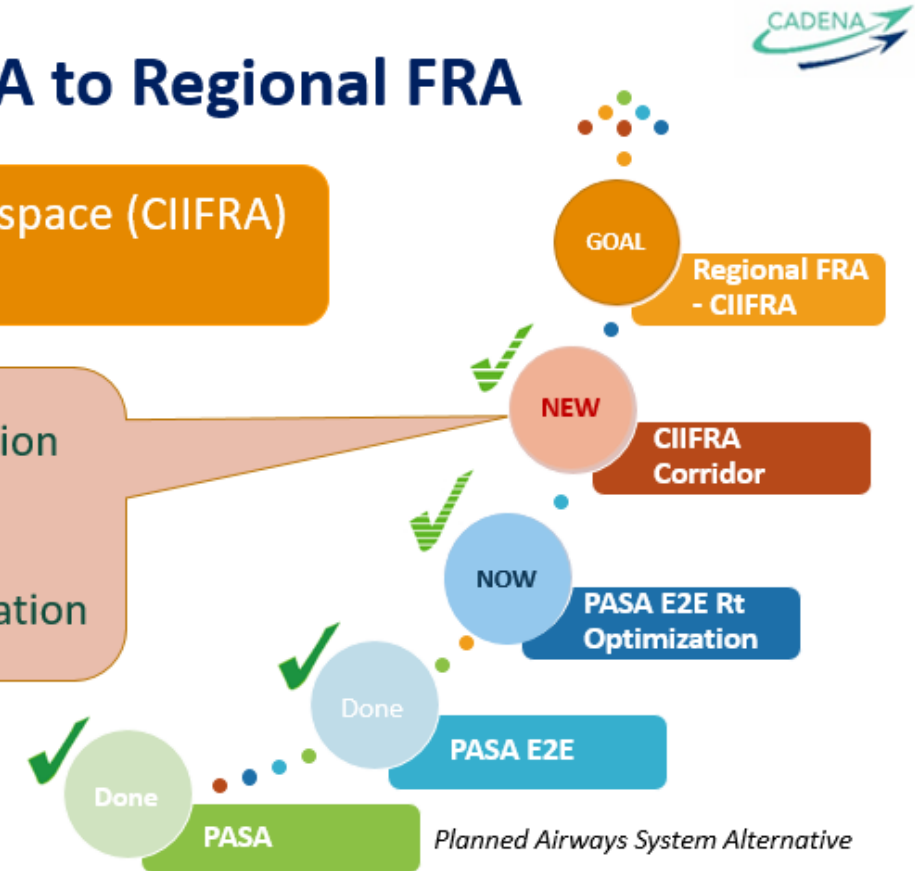
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## Move to Free Route Airspace

### 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 1<sup>st</sup> CIIFRA Trial
- CIIFRA Trial Plan and Implementation



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## Results Track A

CANSO



**The CANSO-IATA-ICAO Free Route Airspace (CIIFRA)  
Trial UPRs Benefit Data  
As of: January 12, 2023**

	Baseline Flight Plan Route vs Trial UPRs Reported Data Projected to 1-Year Savings
<b>Savings:</b>	
Flight min	19,535 min
Fuel (lb)	3,806,672 lb
CO2 (kg)	6,273,658 kg
Cost (\$ USD)	\$ 3,260,444

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## Results Track B

Estimation of 1-year savings based on 12 days of data  
obtained from Steps 0, 1, 2, and 3

KATL-SPJC-KATL  
DAL151/DAL150

	Baseline vs UPR	
Savings	12 Day	1 Year
Flight min:	116	3,528
Fuel (lb):	12,479	379,570
CO2 (kg):	17,887	544,057
Cost (\$):	15,325	466,138



# Mexico's SDR Trial – UAL Benefits

Oct 3 - Dec 3, 2022									
		Saved				Per Flight			
	No.	Time (min)	Fuel (lb)	CO2 (kg)	Cost (\$)	Time (min)	Fuel (lb)	CO2 (kg)	Cost (\$)
SBGR-KIAH	20	42.0	13,360	41,416	7,644	2.1	668	2,071	382
SAEZ-KIAH	46	59.0	22,437	69,555	12,390	1.3	488	1,512	269
SBGL-KIAH	28	57.0	10,451	32,398	9,918	2.0	373	1,157	354
SPJC-KIAH	6	6.0	1,547	4,796	1,044	1.0	258	799	174
SCEL-KIAH	41	53.0	12,060	37,386	9,222	1.3	294	912	225
SKBO-KIAH	8	19.0	2,258	7,000	1,843	2.4	282	875	230
SEQM-KIAH	11	26.0	2,889	8,956	2,522	2.4	263	814	229
MGGT-KIAH	3	9.0	969	3,004	1,800	3.0	323	1,001	600
Total	163	271.0	65,971	204,510	46,383				
	<b>1 Year</b>	<b>1,626</b>	<b>395,826</b>	<b>1,227,061</b>	<b>278,298</b>				

*NOTE: To calculate cost benefits, equipment types were taken into the consideration.*

# Mexico's SDR Trial – DAL Benefits

SENEAM SDR Data (DAL - through October 15, 2022)

	No.	Saved				Per Flight			
		Time (min)	Fuel (lb)	CO2 (kg)	Cost (\$)	Time (min)	Fuel (lb)	CO2 (kg)	Cost (\$)
KLAX-MROC	6	15	3,440	4,931	2,773	2.5	573	822	462
KLAX-MSLP	2	2	299	429	311	1.0	150	214	155
Total	8	17	3,739	5,359	3,084				
	<b>1 Year</b>	<b>517</b>	<b>113,728</b>	<b>163,012</b>	<b>93,805</b>				

*NOTE: To calculate cost benefits, equipment types were taken into the consideration.*

# Mexico's SDR Trial – AMX Benefits

SENEAM SDR Data (AMX - through November 15, 2022)

Oct 16 - Nov 29, 2022		Saved				Per Flight			
	No.	Time (min)	Fuel (kg)	CO2 (kg)	Cost (\$)	T (min)	Fuel (kg)	CO2 (kg)	Cost (\$)
MMTJ-MMGL	9	34.0	1,891	5,976	4,951	3.8	210	664	550
MMTJ-MMMX	21	26.0	1,009	3,188	3,427	1.2	48	152	163
CYVR-MMMX	14	84.0	3,407	10,766	11,194	6.0	243	769	800
Total	44	144.0	6,307	19,930	19,572				
<b>1 Year</b>		1,168	51,157	161,655	158,749				

As of January 2022, the price of Jet A1 was approximately \$816 per metric tonne. This equates to about \$0.82 per KG.  
 Data Source (Nov 5, 2022): <https://www.flightdeckfriend.com/>

*NOTE: To calculate cost benefits, equipment types were taken into the consideration.*

1 kg = 2.20462 lb

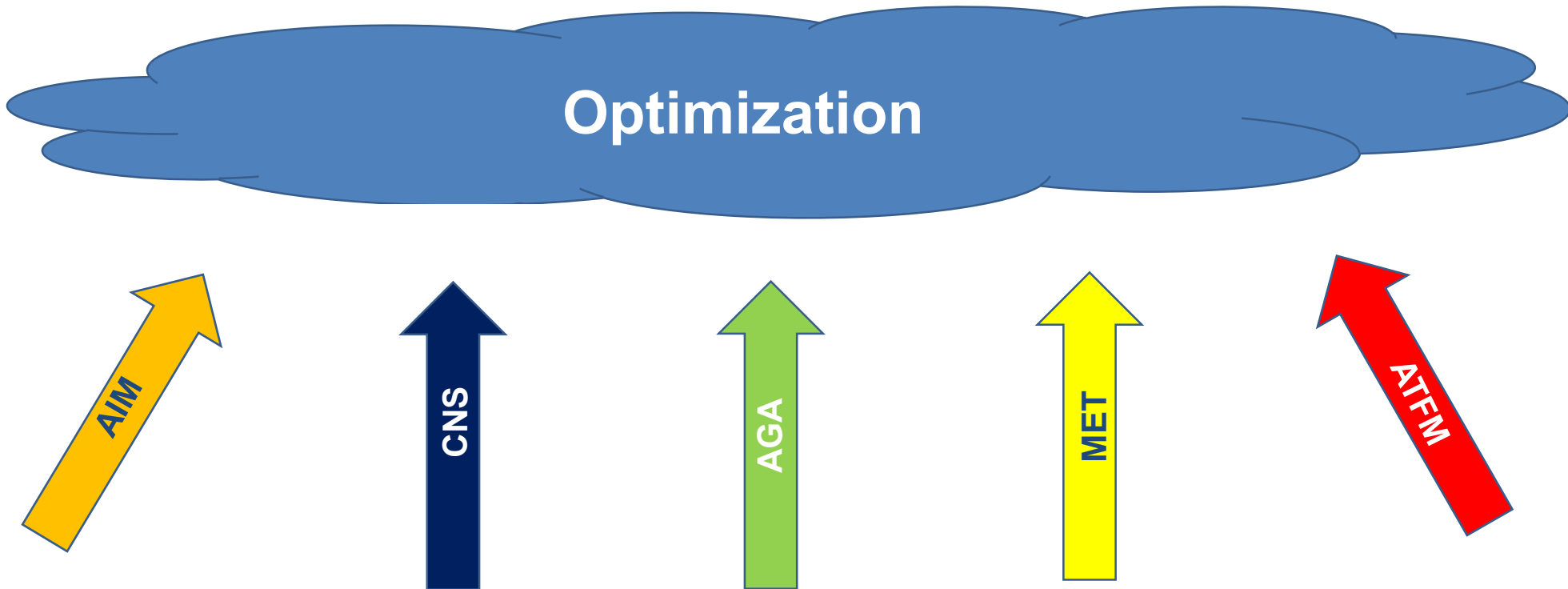
# Overall Benefits

	All phases included
Savings:	
Flight min	26,374 min=33 round trips KATL-SPJC
Fuel (lb)	4,808,578 lb
CO2 (kg)	8,369,443 kg= 20,774,678 miles driven by average car*
Cost (\$ USD)	\$ 4,257,434

\* USA EPA

# What's Next?

- How do we support optimization?



AIM

CNS

AGA



**MET**

