

Regional Operation Support - CADENA

To: ICAO APAC MET/ATFM Seminar

Date: April 22, 2024

CADENA

CANSO ATFM Data Exchange Network for the Americas

Inclusiveness

Transparency

Collaboration

Aug 2016: 1st CADENA RIG Meeting

Dec 2016: Weekly Ops Webex

Aug 2017: CADENA OIS v1.0

Oct 2019: Contingency Procedures

Jan 2023: Twice Weekly Ops Webex

*Simple
Approach*



CADENA Regional Stakeholders

ANSPs

BANSa (Bahamas)
 COCESNA (Central America)
 CORPAC (Peru)
 EANA (Argentina)
 ECNA (Cuba)
 DC-ANSP (Curacao)
 DGAC (Ecuador)
 FAA (USA)
 • ZMA, SJU, ZHU, ATCSCC
 • Space Operations Office
 IDAC (Dominican Republic)
 INAC (Venezuela)
 JCAA (Jamaica)
 OFNAC (Haiti)
 SENEAM (Mexico)
 TTCAA (Trinidad & Tobago)
 UAEAC (Colombia)

State/Territory/Group

ANSA (Aruba)
 DGAC (Costa Rica)
 MWCR (Cayman Islands)
 TNCM (Sint Maarten)
 CARRG (Caribbean Aviation Resilience
 and Recovery Group)



CADENA Twice Weekly Ops Web Conference

- Mondays and Thursdays – 14:00 UTC
- Host ANSPs rotate weekly
- Use ppt template
- Keep the Webex 30 min or less
- All stakeholders welcome
- CADENA HQ
- Virtual Support Team
- CADENA Procedures Manual (based on ICAO DOC 9971)
- CADENA OIS – repository of Ops Webex briefings, **ATFM Daily Plans (ADPs)**, and other documents

To observe CADENA Twice Weekly Operational Web conferences, please ask for the invitation.

CADENA Ops Webex Template and ATFM Daily Plan (ADP)



Webex Template

Name of ANSP – Month Day, Year

Airport/Airspace Constraints (Equipment Outages/Significant NOTAMS/Special Events)	Significant Weather	Other

Daily ADP

- Anticipated Demand
- TMM Planned
- Urgent Advisory
- Weather
- Volcanic Ash
- Constraints
- Special Events
- Equipment Outage
- Other

CADENA Ops Webex: Sample EANA

CANSO

EANA
NAVEGACIÓN
AÉREA
ARGENTINA

CADENA

EANA Argentina – April 1st, 2024

CANSO

Airport/Airspace Constraints (Equipment Outages/Significant NOTAMS/Special Events)	Significant Weather	Other	Other
SAEZ (EZEIZA/MINISTRO PISTARINI) NOTAM A560/2024 RWY 17/35 CLSD WIP MAINT 02,04,09 AND 11 0310-0700. FM 2024-04-02 03:10:00 TO 2024-04-11 07:00:00 NOTAM A562/2024 RWY 11/29 CLSD WIP MAINT 02,04,09 AND 11 0310-0700. FM 2024-04-02 03:10:00 TO 2024-04-11 07:00:00 DAY 5/6 of the six-day long weekend. Check TMM's in advance under ADP-Link files on the Cadena OIS. ANAC - NOTAM ARGENTINA	 MONDAY: • TS and RA fcst for the northeast area • TURB advisory for the central region and the Patagonian area TUESDAY: • RA for the northwest region WEDNESDAY: • NOTHING TO REPORT SMN - Servicio Meteorológico Nacional	MDI FM SABE BTN 2404011400 AND 2404011800 BTN 2404012100 AND 2404012300 MDI 3 MIN FM SABE TO TMA BAIREES DUE TO DEMAND MDI FM SAEZ BTN 2404012100 AND 2404012200 BTN 2404020100 AND 2404020200 MDI 5 MIN FM SAEZ TO TMA BAIREES DUE TO DEMAND MIT AT THE ENTRANCE TO TMA BAIREES BTN 2404011200 AND 2404020200 1 ACFT EV 40 NM VIA ASADA FM SAZS SAZY SAZN SAZR TO TMA BAIREES DUE TO DEMAND MIT AT THE ENTRANCE TO SAEF BTN 2404011100 AND 2404012359 1 ACFT EV 40 NM FM SAEF VIA ROS BTN NTL FLT 1 ACFT EV 15 NM FM SAEF VIA ROS BTN INTL FLT AND BTN INTL/NTL FLT 1 ACFT EV 30 NM FM SAEF VIA MJZ DUE TO DEMAND MIT AT THE ENTRANCE TO SAEF BTN 2404011600 AND 2404020100 1 ACFT EV 40 NM FM SAEF TO TMA BAIREES VIA RAXUR/ELABO LOLAS/SINAL POINTS BTN NTL FLT 1 ACFT EV 15 NM FM SAEF TO TMA BAIREES VIA RAXUR/ELABO LOLAS/SINAL POINTS BTN INTL FLT AND BTN INTL/NTL FLT DUE TO DEMAND	MIT AT THE ENTRANCE TO SAMF BTN 2404011600 AND 2404020100 1 ACFT EV 40 NM FM SCEL TO TMA BAIREES VIA NEBEG/ALBAL/ANKON AND GUVOL POINTS DUE TO DEMAND MIT AT THE ENTRANCE TO SAEZ BTN 2404011300 AND 2404011500 BTN 2404011700 AND 2404020200 1 ACFT EV 40 NM FM SARR VIA TODES/RIOKA/KORTA AND GEUS POINTS BTN NTL FLT DUE TO DEMAND MIT AT THE ENTRANCE TO SAEF BTN 2404011300 AND 2404011500 BTN 2404011800 AND 2404012359 1 ACFT EV 40 NM FM SAVF VIA KIMID/SANBU – PUGLI/PULNA POINTS DUE TO DEMAND MIT AT THE ENTRANCE TO SAEF BTN 2404011000 AND 2404011500 BTN 2404012100 AND 2404020100 1 ACFT EV 30 NM FM SUEO VIA PAPIX/KUKEN POINTS DUE TO DEMAND AND METEOROLOGICAL CONDITIONS Medidas ATFM

CADENA Ops Webex: Sample TTCAA

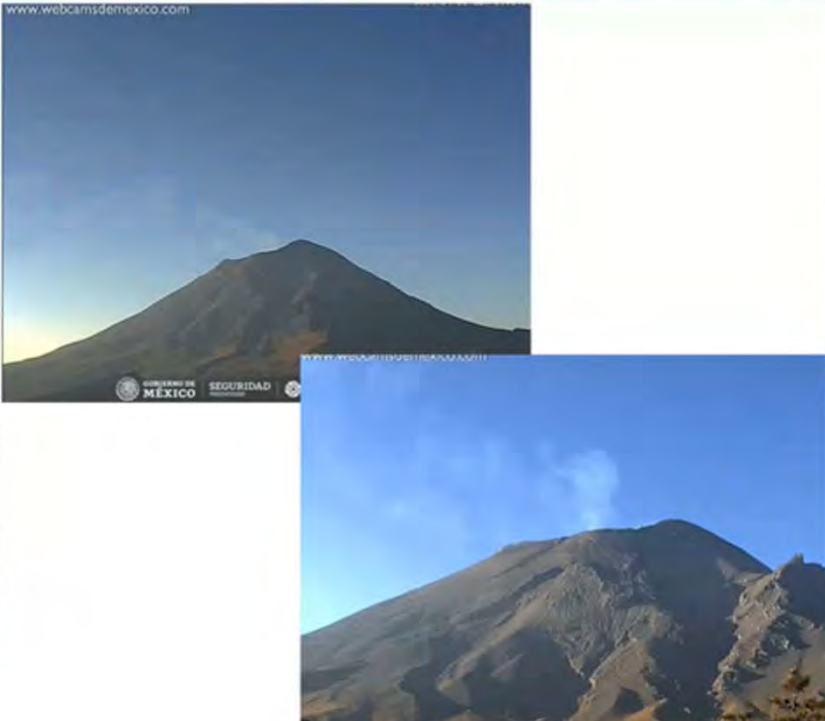


CADENA

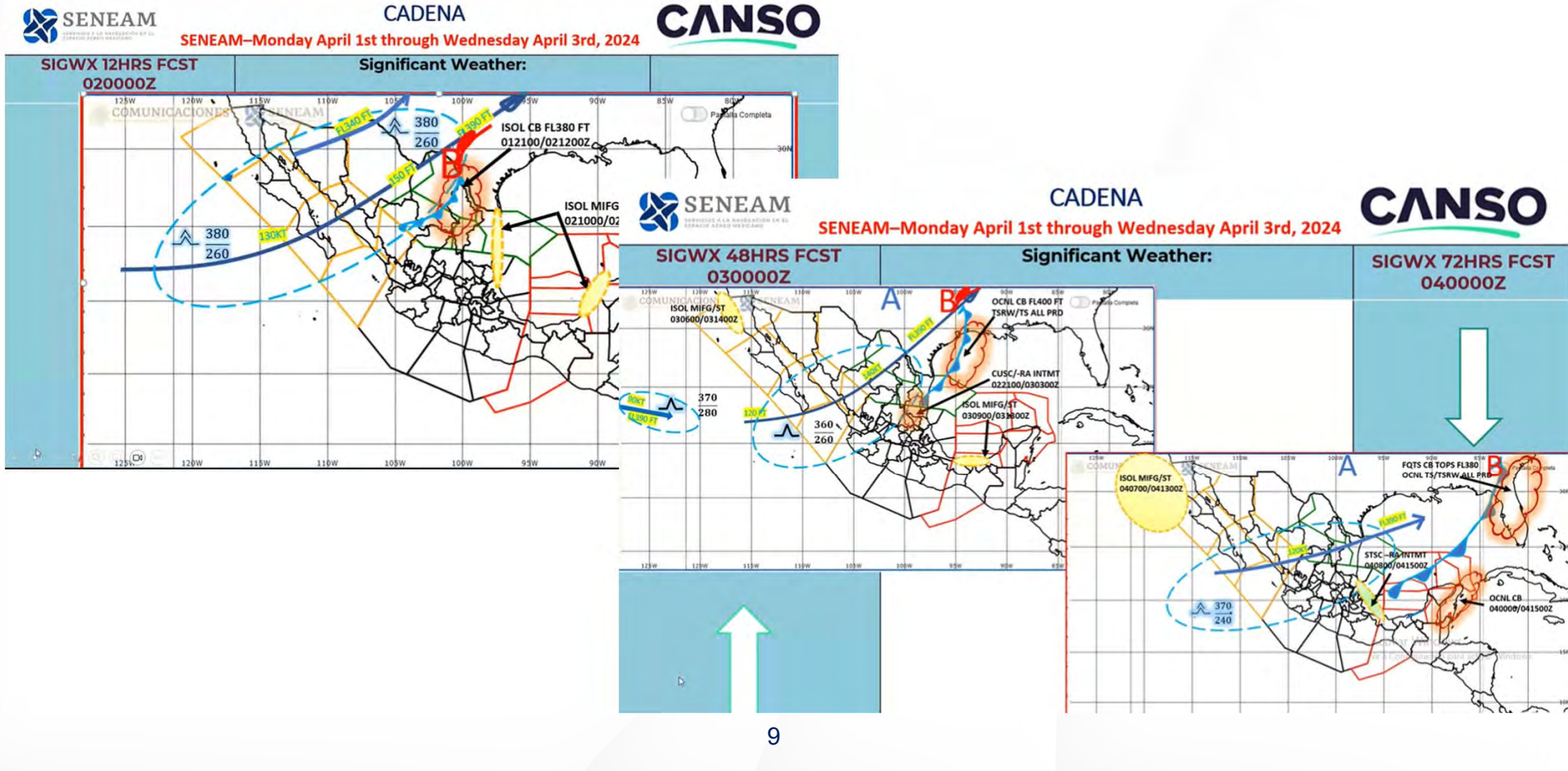
PIARCO – April 01, 2024

Airport/Airspace Constraints (Equipment Outages/Significant NOTAMS/Special Events)	Significant Weather	Other
TAPA - A0602/24 V.C.BIRD AD HR OF SER HAVE CHANGED DUE TO STAFF SHORTAGE 1000-0200 .ALL TFC DURING PERIOD OF CLOSURE WILL BE HANDLED BY PIARCO ACC. TFFR - A0357/24 DAILY 0300 – 1100 UTC RUNWAY 12/30 CLOSED TO ALL TRAFFIC EXCEPT STATE HELICOPTERS, UNTIL ARIL 30. SEE NOTAM FOR DETAILS. TFFR - A0518/24, A0521/24 DOWNGRADING OF CTR TO CLASS G , SEE NOTAM FOR DETAILS . For a list of current NOTAMs click the link: https://caa.gov.tt/notices-to-operators-notification/#elf_l1_Lw	TTPP/TTCP NO SIG. TTZP FIR NO SIG. DAILY DEMAND MODERATE.	REQUEST FOR ATFM PLANNING: FLIGHTS PROPOSED FOR ICC CWC/24 Advanced Notification of intended operations Aircraft operating agencies are requested to submit flight schedules for all operations within the Piarco UTA/CTA between May 20, 2024, and July 20, 2024, at least forty-eight (48) hours before the Estimated Time of Departure (ETD). piarcoatfmu@caa.gov.tt

CADENA Ops Webex: Sample SENEAM (1 of 3)

 SENEAM SERVICIO A LA NAVEGACIÓN EN EL ESPACIO AEREO MEXICANO	CADENA SENEAM—Monday April 1st through Wednesday April 3rd, 2024	
Airport/Airspace Constraints (Equipment Outages/Significant NOTAM/Special Events)	Volcanic Ashes:	Other:
• STAFFING: ADEQUATE VOLUME: MODERATE • MMGL: • A2119/24 B) 2403200650 C) 2405291035 D) MAR 20 0650-1035, 23 0630-1030, APR 09 16 26 30 0620-1020, 10 17 24 0630-1035, 13 20 27 0630-1030, MAY 01 08 15 22 29 0650-1035, 04 11 18 25 0630-1030, 7 14 21 28 0620-1020 E) RWY 11/29 CLSD • MMSD: • A2365/24 B) 2404020600 C) 2404141230 D) DLY 0600-1230 EXC 08 E) RWY 16/34 CLSD • MMSM: • A2314/24 B) 2404011600 C) 2404011900 E) RWY 04L/22R CLSD • A2315/24 B) 2404021600 C) 2404021900 E) RWY 04L/22R CLSD • MMMY (PERMANENTLY): • A6386/23 NOTAMR A5741/23 SINGLE DIRECTION ESTABLISHED ON FOLLOWING ROUTE SEGMENTS • A2325/24 B) 2403272347 C) 2405282359 E) RWY 16/34 CLSD • CHANGE OF RWY DESIGNATOR: 11-29 TO 12-30 • MMFR: • A2204/24 NOTAMR A2190/24 B) 2403230154 C) 2406232359 E) ACFT FM MHCC TO MUHF HEADING NE BTN FL210 AND FL330 SHOULD CONTINUE IN THE FOLLOWING ROUTES (AND VICEVERSA) • B0280/24 NOTAMR B0266/24 B) 2404020230 C) 2404030701 D) DLY 0230-0701 E) DANGEROUS AREA FOR REENTRY OF ROCKET STARLINK 7-18 LATERAL LIMIT AREA FORMED BY THE UNION OF THE FLW POINTS		• MMUN: • A1608/24 NOTAMR A1590/24 B) 2403021600 C) 2404142300 D) DLY 1600-2300 E) DUE TO HIGH MMUN DEP VOLUME OVER MYDIA FROM 1600-2300 UTC THE FOLLOWING DESTINATIONS WILL BE ROUTED THROUGH THE HAVANA FIR: KMIA, KFLI, KMCO. • SEE NOTAM DETAIL AT: https://www.notams.faa.gov - VA: NIL. 1. TMM'S GO TO NEXT SLIDES 2. TACTICAL RTE TO PREVENT GND DLA FOR DEP TFC FM MMUN TO EAST COAST, MMID ACC IS USING TACTICAL RTE FOR DEP TFC DAILY AND FROM 1700 TO 2100Z, ONLY AS NEEDED AND AFTER CREWS ACCEPTANCE, AS FOLLOWS: • ORIGINAL ROUTE: CUN UM219 MYDIA M219 KNOT FPR • TACTICAL ROUTE: CUN UT27 PISAD M215 KNOT FPR • MMUN-KHOU/KIAH/KDFW/KSAT/KAUS/KDEN: (1900UTC-0000UTC) • ENEBA2A UT27 OMVIP UT45 ALKIM DCT KEHLI A766 KELPP • (SID) UDGV DCT MID UL207 IPSEV L207 FPR.../(SID) UT27 OMVIP DCT IPSEV L207 VUH...FPR • (SID) UDGV DCT MID UL208 DUTNA L208 FPR.../(SID) UT27 OMVIP DCT DUTNA L208 FPR...

CADENA Ops Webex: Sample SENEAM (2 of 3) CANSO



CADENA Ops Webex: Sample SENEAM (3 of 3)

CANSO



CADENA

SENEAM—Monday April 1st through Wednesday April 3rd, 2024



		TMMs				
		DATE	TMMs	AIRPORT OR AIRSPACE	TIME	UNITS REQUESTED TO APPLY THE TMMs
MMPR-FMP: REQUESTED TMMs	→	MONDAY APR 01	NO TMMs REQUESTED	-	-	-
		TUESDAY APR 02	NO TMMs REQUESTED	-	-	-
		WEDNESDAY APR 03	NO TMMs REQUESTED	-	-	-
MMZT-FMU: REQUESTED TMMs	→	MONDAY APR 01	20 MIT	MMSD - MMSL	1600 - 2000 UTC	KZLA - KZAB - MMTY - MMEX
		TUESDAY APR 02	NO TMMs REQUESTED	-	-	-
		WEDNESDAY APR 03	NO TMMs REQUESTED	-	-	-
MMGL-FMP:	→	MONDAY APR 01	20 MIT	MMGL	1400 - 0000 UTC	MMEX
		TUESDAY APR 02	20 MIT	MMGL	1400 - 0000 UTC	MMEX
		WEDNESDAY APR 03	20 MIT	MMGL	1400 - 0000 UTC	MMEX
MMID-FMU: REQUESTED TMMs	→	MONDAY APR 01	30 MIT	MMUN	1400 - 2200 UTC	KZHU - MUFH - MMTY - MMEX
		TUESDAY APR 02	30 MIT	MMUN	1400 - 2200 UTC	KZHU - MUFH - MMTY - MMEX
		WEDNESDAY APR 03	30 MIT	MMUN	1400 - 2200 UTC	KZHU - MUFH - MMTY - MMEX

CADENA OIS

CANSO



CANSO



Information Regional TMM 0 Active Reroutes 0 Delays 0 Advisories 12 Español



Regional Operations Plan

FAA San Juan: 19/Jan/2024 14:23

Anticipated Demand Information MEDIUM

TMM Planned ZSU-TAPA: ARR VIA GABAR/LAMKN L453 AND L455 15 MINIT L454 CLSD

Urgent Advisory NONE

Weather SCATTERED SHOWERS BEFORE NOON. MOSTLY SUNNY, WITH A HIGH NEAR 87. EAST SOUTHEAST WIND BETWEEN 15 AND 17 MPH, WITH GUSTS AS HIGH AS 22 MPH. CHANCE OF PRECIPITATION IS 30%.

Volcanic Ash NONE

Constraints NONE

Special Events PARACHUTE ACTIVITY OVER TJAB AND X63

Equipment Outages SJU ASR8 OTS SJU RWY10 CLSD SJU ILS RWY10 DME OTS STX LOC OTS STT ASR OTS

Other VQS UXO ACTIVE SFC-050 R7103 ACTIVE SFC-060

ECNA Cuba: 19/Jan/2024 13:38

CADENA OIS - Information

Information ▼

Regional TMM **2**

Active Reroutes **0**

✈ Delays **0**

Advisories **10**

🇪🇸 Español

Master Slide Deck

ADP Link Files

Reroute Repository

Contingency Form

Airport Capacity

Sector Capacity

Participant List

Acronyms

LOA List

Master Slide Deck

Slide Deck List (Master and Ad-Hoc)

Upload Time	File Name
01/Apr/2024 14:25	Host Master - CADENA PLANNING WEB CONFERENCE - 04 01 2024.pptx
28/Mar/2024 14:34	Host Master - CADENA PLANNING WEB CONFERENCE - 03 28 2024.pptx
25/Mar/2024 14:29	

ADP Files

Español

Login

ANSP	Uploaded By	File Name	Upload Time
CADENAHQ	Joe Hof	Introduction to CADENA for Amerijet 04 04 2024.pptx	01/Apr/2024 18:02
UAEAC	steven Carrillo	PDA FCMU COL 28032024.pdf	28/Mar/2024 12:35
ATO	Jack White	SpX Starlink 6-45 (X2165) AMP.docx	28/Mar/2024 11:46

CADENA OIS – TMM, Routes, Delays, Advisory

Information ▾	Regional TMM 2	Active Reroutes 0	Delays 0	Advisories 10	Español
---------------	-----------------------	--------------------------	-----------------	----------------------	---------

Regional TMM									
Regional AFTM Solutions/ Traffic Management Measures									
Initiated By	Provided By	Element	Type	Description	Start time	End time	Reason	NOTAM	
SENEAM	SENEAM	MMGL (AIRPORT)	MIT	20 MIT	01/APR/2024 14:00	01/APR/2024 23:59	DEMAND	N/A	Detail
SENEAM	SENEAM	MMUN (AIRPORT)	M		01/APR/2024	01/APR/2024			

Advisories							
Regional Advisories							
ID	ANSP / Airline	Type	Start Date	End Date	Summary	Reason	
1387	SENEAM	FYI	16/AUG/2023 00:48	31/DEC/2024 23:59	SINGLE DIRECTION ROUTES	FLows BETWEEN MMID ACC & MMTY ACC	Details
1426	SENEAM	FYI	02/MAR/2024	14/APR/2024	MMUN OFFLOAD ROUTES	IN ORDER TO PREVENT CND PLG FOR TFC TO	Details

CADENA OIS



Exchange:

- MS documents (Word, PPT, Excel)
- Text, pdf, and picture

Enter:

- **ATM Solutions**
- **Advisories/Notices**
- **Airport delay**
- **ATFM Daily Plan**
- **Calendars**
- **PASA Route Request**
- **Chat**

Store:

- Routes (PASA, UPR)
- Forms (Contingency)
- Capacity info (Airport/Airspace)

<https://www.cadenois.org> Public domain for read only.
Member domain to read and upload information.

WhatsApp CADENA OPS Group

CANSO

~ Scott Pressley - [redacted]
Do we know what the RWY closure at MMMX is for? 8:53 PM

Joe Hof
Checking 8:54 PM

Mario Hernandez
Good morning everybody, this RWY closure at MMMX is done for routine revision purposes only. Airport operator do this weekly for both RWYs, one on Tuesdays and the other one on Wednesdays... That 30 minutes closure impacts operations deeply because they program same S operations during the 1600 to 1700 period. 9:12 AM

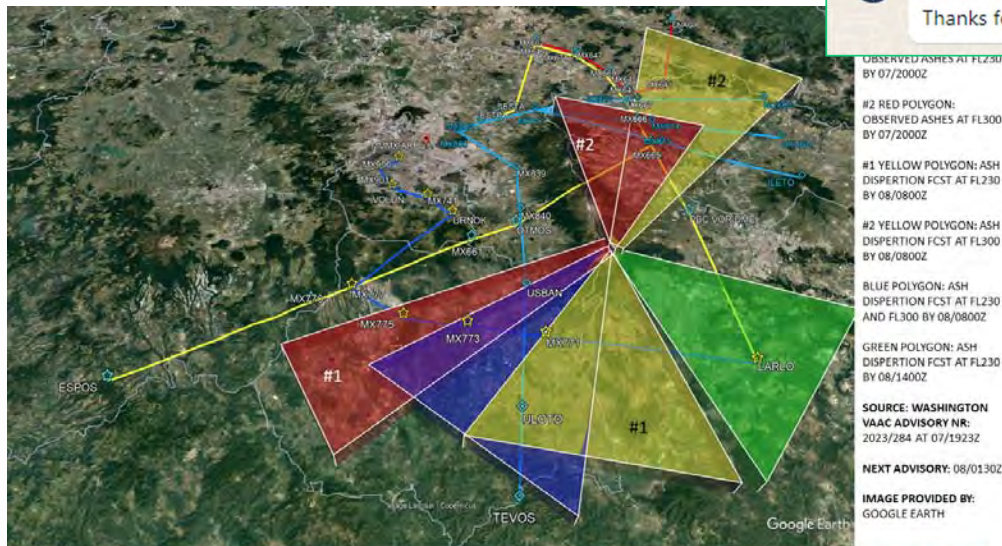
~ Scott Pressley - [redacted]
Thank you! 9:14 PM

~ Brandon Tal +1 (786) 580-1856
Good afternoon guys we are hearing In the command center that MUHA is closed. Does anyone have any further details? Thank you. 12:41 AM

Ricardo Martínez González
Good afternoon. MUHA is closed due operational reasons, expected time to resume ops 18:30 12:45 AM

Deano Ledford
Forwarded
Good afternoon all,
Nassau has regained limited functionality to our radar processors and are now accepting arrivals with 20nm in-trail and are releasing all departures at a minimum of 4mins intervals. 5:47 AM

Mario Hernandez
Thanks for the update Deano!!! 5:48 AM



IMPORTANT: THIS ILLUSTRATION IS MERELY INFORMATIVE AND FOR SITUATIONAL AWARENESS ONLY. SHALL NOT TO BE USED FOR FLIGHT PLANNING PURPOSES.

Ricardo Martínez González

~ Tia [redacted]
Buenos días.
At the moment, RESISTENCIA FIR (SARR) is without communications. No frequencies available on the entire FIR. A NOTAM will be issued where no ATS SERVICE will be provided. Stand by for the Notam number 8:32 PM

~ Al Castillo + [redacted]
Thank you Flavia 8:33 PM

Joe Hof
CADENA has been advised that a departure from the HAV airport had to return due to an emergency. The flight landed and has been towed off the runway. The airport is now open and operations are returning to normal 1:37 AM

CADENA Contingency Event Handling



- CADENA Procedures Manual
- ANSP Contingency Form
- CADENA Advisory
- Contingency Event and Checklists
- CADENA Ad Hoc Web Conferences
- Training: Our goal is to train like we respond!
 - Annual hurricane training in every spring
 - Quarterly Contingency Training

15 Contingency Events

ACCs

- Evacuation
- Radar failure
- Air/Ground (A/G) communication failure
- Telephone or landline failure
- Power failure
- Flight data processing system (FDPS) failure
- Staffing shortages
- Work stoppages (strikes)

Severe weather / natural phenomena

- Hurricanes / tropical storms
- Volcanic eruption
- Earthquakes

Airports

- Aircraft accidents / incidents

FMU outages

- Equipment failure
- FMU services not available

Off-Nominal (Unusual) Events

- Global pandemic (COVID-19, for example)

Hurricane Briefing Template

CANSO

HURRICANE (NAME) UPDATE – 1400 UTC – DATE



ANSP Name

PROJECTED PATH IN YOUR AIRSPACE

- THE CADENA HOST WILL ADD A GRAPHIC OF THE PROJECTED PATH
- ADD SLIDES, IF NEEDED
- Recommend a screenshot from: <https://www.nhc.noaa.gov/>

HURRICANE (NAME) UPDATE – 1400 UTC – DATE



ANSP Name

IMPACTED ROUTES	PLANNED TRAFFIC MANAGEMENT MEASURES
• ADD GRAPHICS, IF ABLE • ADD SLIDES, IF NEEDED • Recommend a screenshot from a website like: https://skyvector.com/ Use "World Hi" Add layers, if applicable	• FOR EXAMPLE: REROUTES, MIT, MINIT • LIST THE IMPACTED NEIGHBORING ANSPs

HURRICANE (NAME) UPDATE – 1400 UTC – DATE



ANSP Name

PROJECTED IMPACT

DAY 1

AIRPORT CLOSING (DATE/TIME)
STAFFING ISSUES
EQUIPMENT OUTAGES

DAY 2

AIRPORT CLOSING (DATE/TIME)
STAFFING ISSUES
EQUIPMENT OUTAGES

WHEN APPLICABLE

AIRPORT RE-OPENING (DATE/TIME)

HURRICANE (NAME) UPDATE – 1400 UTC – DATE



ANSP Name

OTHER ISSUES

- 1
- 2
- 3

"TELL US WHAT WE DO NOT KNOW"

"PLEASE KEEP YOUR NOTAMS UP-TO-DATE"

Hurricane Event Contingency Training

CANSO

EXERCISE **CADENA Contingency Form**

Impacted Facility / Sector: Kingston and Mexico FIRs
 HQ & Hurricane Charlie Update March 29, 2023 at 1400 UTC

Type of Contingency: ☐ Communication ☒ Facility ☐ Surveillance ☐ Staffing ☐ Other

Detail
 Hurricane Charlie has passed over Jamaica and is approaching the Yucatan peninsula. The Hurricane is expected to make landfall within the next 24 hours near Cancun.

Traffic Management Measures

☒ Airborne Holding	☒ Airborne Delay Program (ADP)	☒ Air-traffic
☐ In-flight	☐ In-flight	☐ In-flight
☐ Airborne Holding	☐ Airborne Delay Program (ADP)	☐ Air-traffic

Detail
 Expect on-site in-flight, on-site in-flight to select airports and tactical resources in the Kingston and Mexico FIR due to the track of Hurricane Charlie.

Imp. Affected

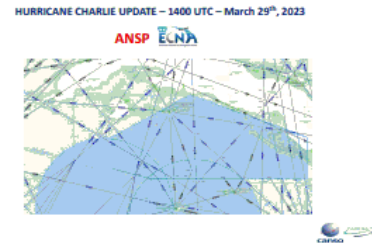
☒ TSP	☒ TSP	☒ TSP	☒ TSP
☒ MFA	☒ MFA	☒ MFA	☒ MFA
☒ MFA	☒ MFA	☒ MFA	☒ MFA
☒ MFA	☒ MFA	☒ MFA	☒ MFA

HURRICANE CHARLIE UPDATE – 1400 UTC – March 29th, 2023

ANSP ECNA

HURRICANE CHARLIE NOTICE NO.15 MARCH 29th, 2023 1100 UTC

CHARLIE is located at 0900 UTC on Lat 18.8N and Long 80.9W. This position places it 40nm (65km) East of Grand Cayman, and 440nm (710km) E of Tulum, Mexico. CHARLIE is forecast to maintain its hurricane category later today. CHARLIE moves near W (280 degrees) at the rate of 54kt (25km / h). A general motion towards W / WNW is expected during the next few days. On the forecast track, CHARLIE's core is away from the W coast of Jamaica. It is forecast to move near or over the Cayman Islands this morning and then approach the Yucatan peninsula in Mexico tonight or early on Friday. Maximum winds are in the order of 65kt (121km / h) with higher gusts. Hurricane force winds extend up to 115nm (215km) from the center. The estimated minimum pressure is 982hpa (735.65mm). Tropical storm conditions influence the south of the FIR and along the south coast of Cuba today and early on Thursday.



CANSO LATIN AMERICA AND CARIBBEAN

SHAPING OUR FUTURE SKIES
 canso.org

Exercise: CADENA Hurricane Charlie Planning Web Conference

March 29, 2023
 1400 UTC



HURRICANE CHARLIE UPDATE – 1400 UTC – March 29th, 2023

ANSP ECNA

PROJECTED IMPACT

DAY 1
 AIRPORT CLOSING: NONE
 STAFFING ISSUES: NONE
 EQUIPMENT OUTAGES: NIL

DAY 2
 AIRPORT CLOSING: NONE
 STAFFING ISSUES: NONE
 EQUIPMENT OUTAGES: NIL

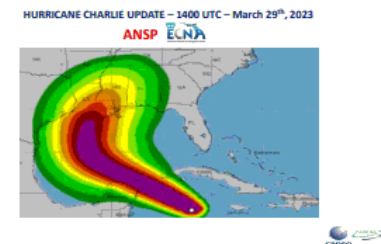
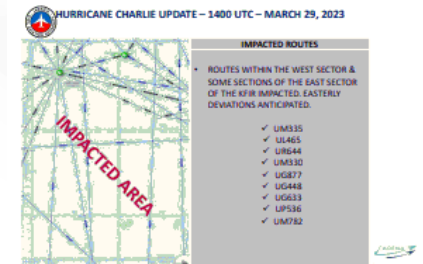
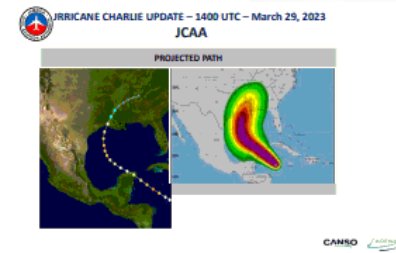
WHEN APPLICABLE
 AIRPORT RE-OPENING: DOES NOT PROCEED

HURRICANE CHARLIE UPDATE – 1400 UTC – March 29th, 2023

ANSP ECNA

OTHER ISSUES

ECNA WILL KEEP OBSERVING THE EVOLUTION AND TRACK OF HURRICANE "CHARLIE". THE TACTICAL MEASURES TO PUT INTO PRACTICE IN THE COMING DAYS WILL DEPEND ON CHARLIE'S POSITION AND DEVELOPMENT.



HURRICANE CHARLIE UPDATE – 1400 UTC – March 29th, 2023

ANSP ECNA

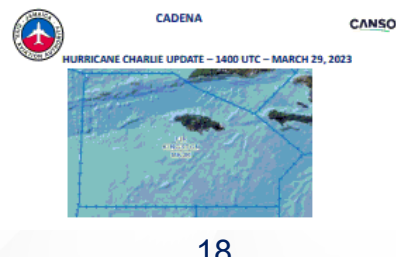
IMPACTED ROUTES

LATERAL DEVIATIONS ON:

- ✓ AB99/UM779
- ✓ GA30/UM406
- ✓ MU/UM221
- ✓ UL780
- ✓ RJ/UM644
- ✓ RB30/UM330
- ✓ MU/UM335
- ✓ GU/UM777
- ✓ GU/UM448
- ✓ MU/UM328
- ✓ UL345

PLANNED TRAFFIC MANAGEMENT MEASURES

TO BE TACTICALLY TAKEN DEPENDING ON CHARLIE'S TRAJECTORY



HURRICANE CHARLIE UPDATE – 1400 UTC – MARCH 29, 2023

JCAA

AIRCRAFT	CLOSURE DATE	STAFF ISSUES	EQUIPMENT OUTAGES	REOPEN DATE	STATUS
ANCP	03/28/23	STBY STAFF AVAILABLE	RAPID, ILS QTS & VOR/DME QTS. RWY DEBRIS	04/02/23	CLOSED
ANCS	03/29/23	EM. STAFF AVAILABLE	NONE	03/30/23	CLOSED
ANCS	03/29/23	NONE	NONE	03/30/23	CLOSED
ANCR	03/29/23	NONE	NONE	03/30/23	CLOSED
ANCB	03/29/23	NONE	SCM VOR/DME US	03/30/23	CLOSED

HURRICANE CHARLIE UPDATE – 1400 UTC – MARCH 29, 2023

JCAA

PLANNED TRAFFIC MANAGEMENT MEASURES (MAR /29/23-MAR/31/23)

REROUTE

- WEST SECT. TFC. REROUTED TO EAST SECTOR
- NBND TFC (NBND UM221 COLBY) &
- SBND TFC (PUTUL UP406->SIA->HANCK UL347 KASOR).

MTs

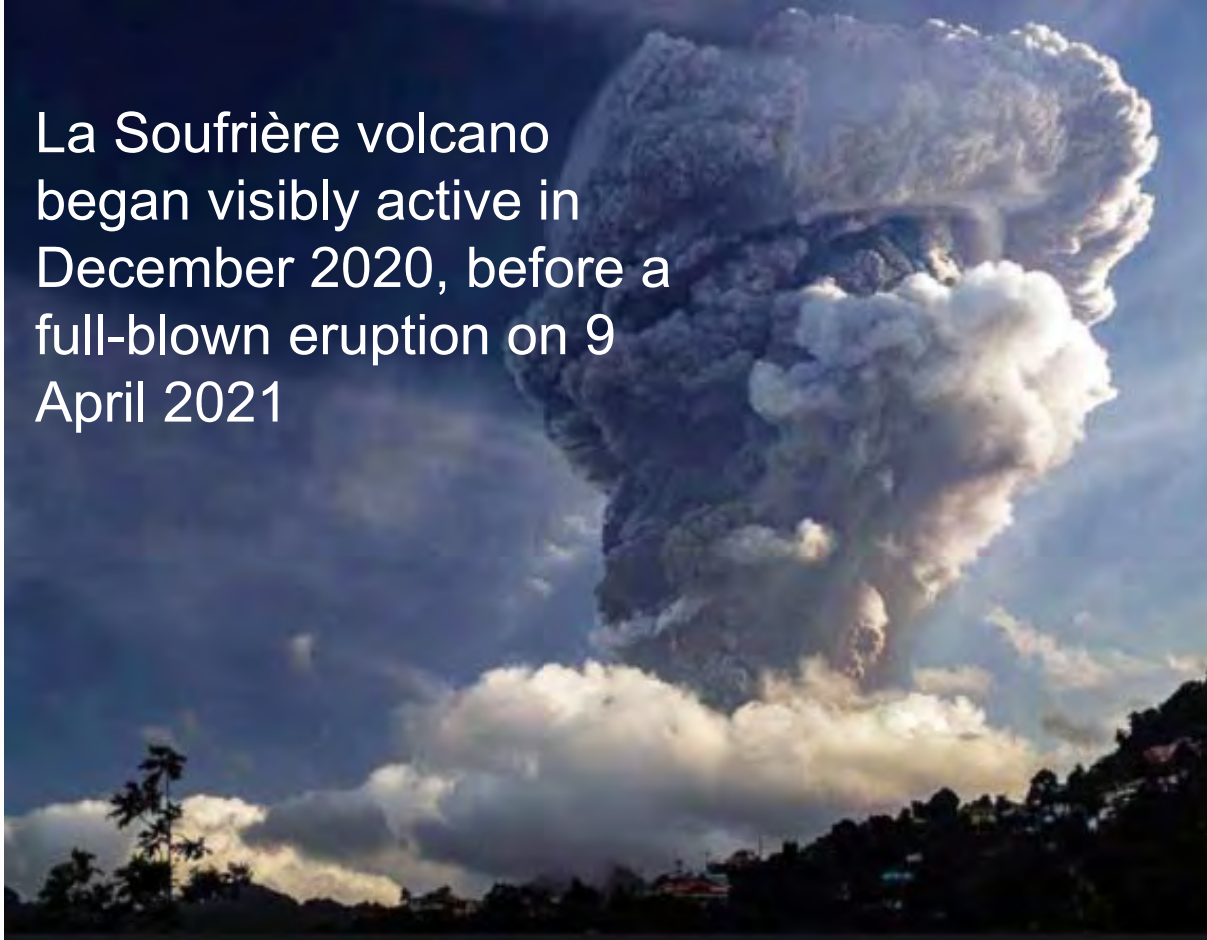
- 40NM BTW TFC AT DIFF. LVLs, SIM. RTE
- 80NM BTW TFC AT SIM. LVLs, SIM. RTE

IMPACTED NEIGHBORING ANSPs

- HAVANA, CENAMER & NORTHERN SECTION OF PANAMA impacted.

La Soufrière Volcano in Saint Vincent and Grenadines

La Soufrière volcano began visibly active in December 2020, before a full-blown eruption on 9 April 2021



Event is Communicated via

- WhatsApp CADENA Group
- CADENA OIS Urgent Advisories and the associated push email notifications
- CADENA Ops Group email notifications
- Weekly Operational Web Conferences
- Piarco ACC updates posted on the CADENA OIS

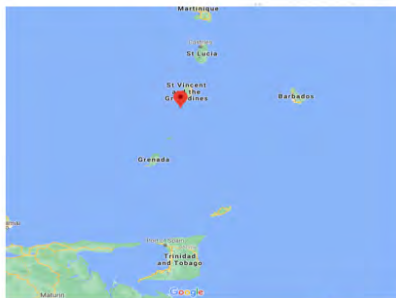
CADENA Status Update of La Soufrière Volcano Eruption

Status Briefing
uploaded to the
CADENA OIS

CANSO

CADENA

LA SOUFRIERE OVERVIEW



LA SOUFRIERE VOLCANO UPDATE – 1400 UTC – APRIL 10, 2021

PIARCO UTA/CTA/FIR GENERAL INFORMATION

EQUIPMENT OUTAGES	TMMS PLANNED	REMARKS
TBPB A0539/21 NOTAMR A0534/21 Q) TTZP/QNMW/IV/BO/AE/000/99 9/1304N05929W175 A) TBPB B) 2104092325 C) 2104101600 E) DVOR/DME 'BGI' 112.7 MHZ CH74X COMPLETELY WITHDRAWN. DO NOT USE	REROUTES WILL BE IMPLEMENTED TACTICALLY PLEASE REFER TO SLIDE 7 FOR ROUTE IMPACTS	NONE

LA SOUFRIERE VOLCANO UPDATE – 1400 UTC – APRIL 10, 2021

PIARCO UTA/CTA/FIR GENERAL INFORMATION

DEMAND	Weather	Staffing
Low to Medium	VOLCANIC ASH – Affecting large portion of the Piarco UTA/CTA/FIR. Please see SIGMET on next page. No other Significant Weather in the forecast within the Piarco FIR.	Adequate

CADENA



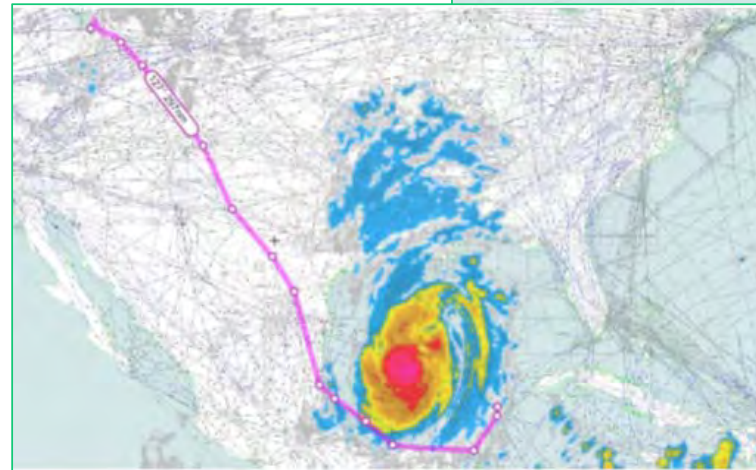
When the Region Knows How to Collaborate

CANSO

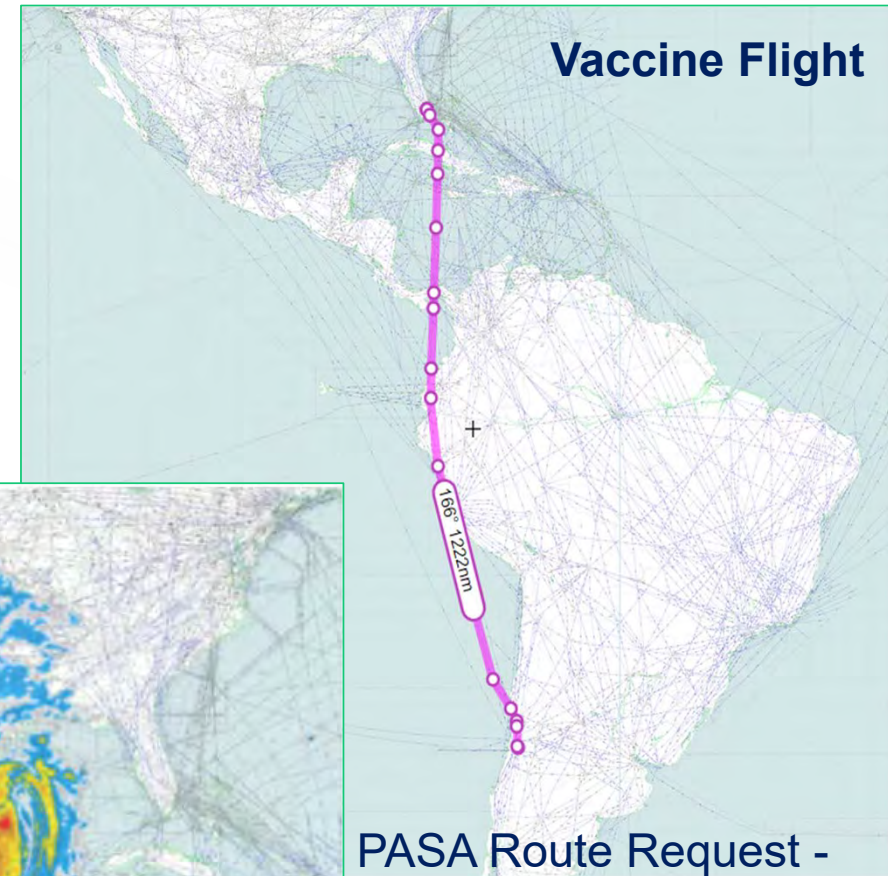
Coordination:

- ATC-Zero events (ACC closures)
- PASA Route Requests to avoid wx
- PASA RR - Vaccine Priority Flights
- Rocket launch AHA

Space Operations
Joined - July 2, 2020



PASA Route Request - OCT 7, 2020



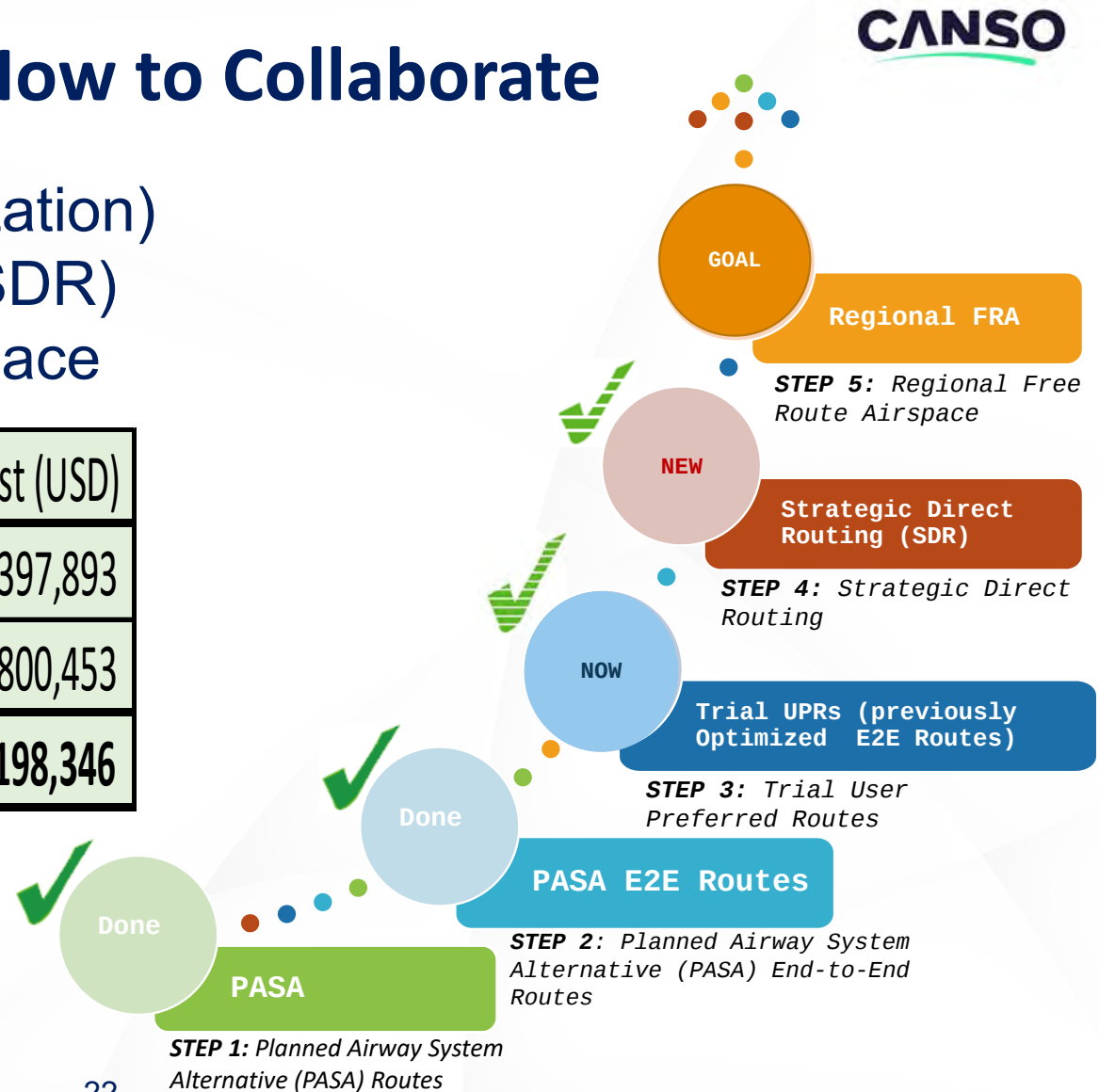
PASA Route Request -
DEC 31, 2020

When the Region Knows How to Collaborate

- Trial UPRs (Route Optimization)
- Strategic Direct Routing (SDR)
- Regional Free Route Airspace

	Time (min)	Fuel (kg)	CO2 (kg)	Cost (USD)
Trial UPR	34,639	3,147,176	9,945,076	5,397,893
SDR	11,501	830,339	2,623,867	1,800,453
Total	46,140	3,977,515	12,568,943	7,198,346

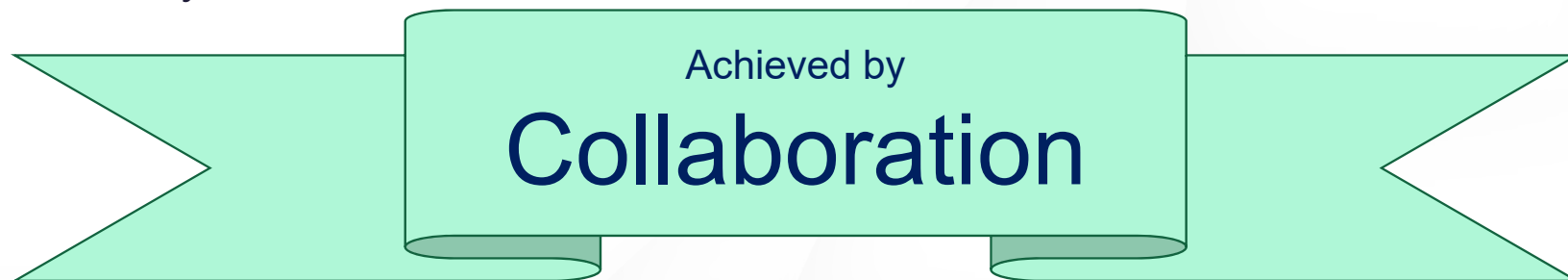
(as of Jan 22, 2024)



Simple Approach and Great Benefits

Sample Quantitative (monetary) Benefits

- UAL - Hurricane Maria Recovery Operation Case Study – \$1.0M-\$5.4M
- JBU - Return Home from Hurricane Maria Case Study – \$182.0K
- AAL - Jamaica Loss of Radar Surveillance Case Study – \$225.0K
- CMP - Jamaica Loss of Radar Surveillance Case Study – \$175.5K
- UAL - Colombia Loss of Satellite Comm Case Study – \$192.0K
- VOL - Filed FPLs via CADENA OIS while AFTN outage - \$690.8K
- WALKY Project – Move WALKY position – 165,323kg of CO2/year; \$166.2K/year
- LIR12NM Project – Shortcut to LIR – 415,224kg of CO2/year; \$413.6K/year
- UM219 Offload Project – Reduce Cancun Dep Delay - 110,232kg of CO2/year; \$6.0M/year
- EMOVI DCT ANEPU Project – Habana/Merida DCT for Tulum overfly – 51,484kg of CO2/yr; \$57.9K/yr



CANSO **Aviation** Data Exchange Network for Cooperative Excellence (CADENCE)

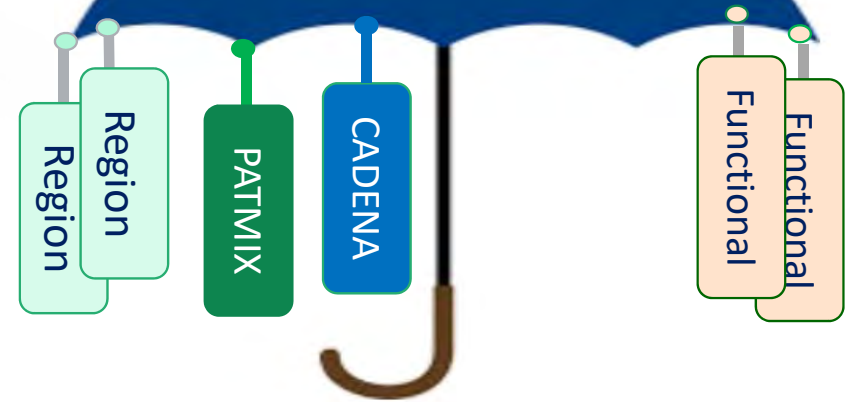
The CADENCE TF is a strategic initiative designed to help develop, or enhance, a network for

operational coordination and
information sharing

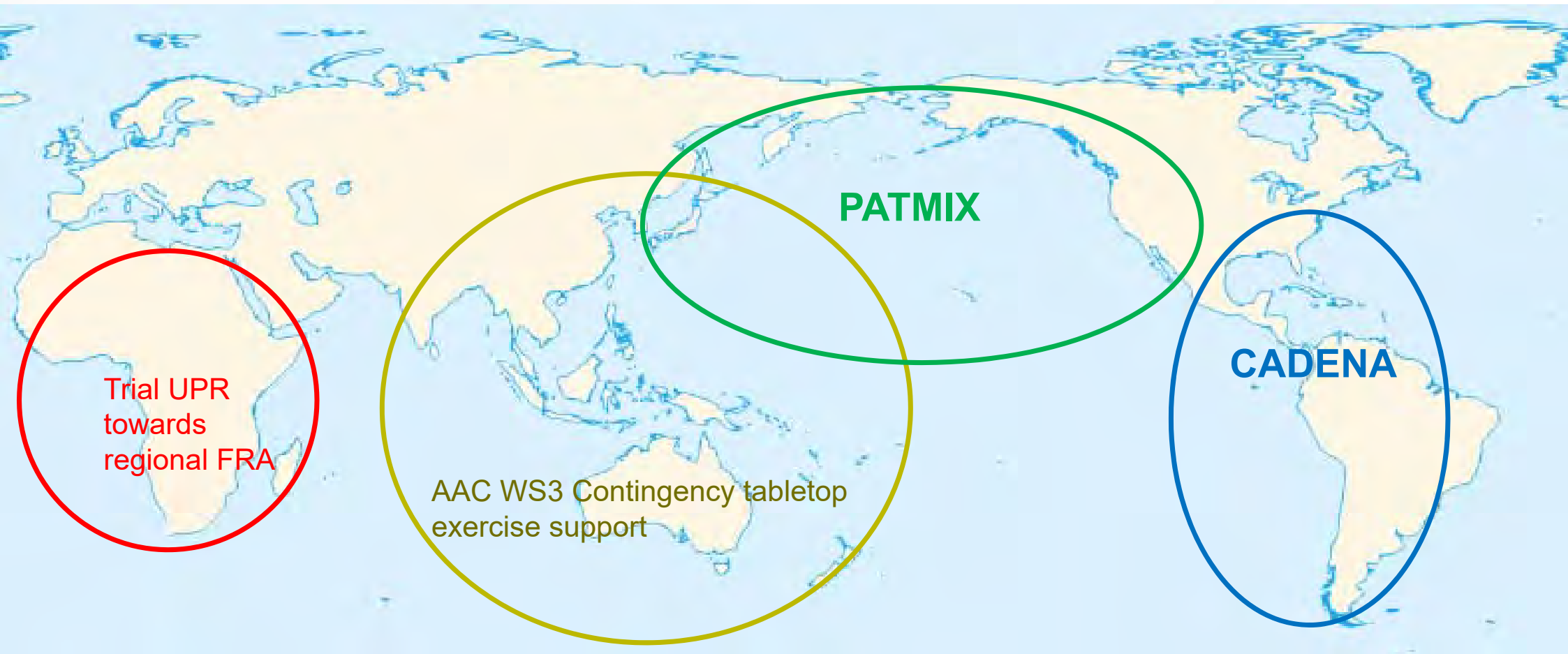
among air navigation service providers (ANSPs) in flight information regions (FIRs) around the world.

CANSO

CANSO Global OIS



Current CADENCE TF Efforts



Take Away Message

We need to collaborate to achieve a higher level of regional operational safety and efficiency.

No Country Left Behind (NCLB)



“Strong relationships are based on trust and communication. But if there is no communication, there can be no trust.” ~ Simon Sinek



THANK YOU

