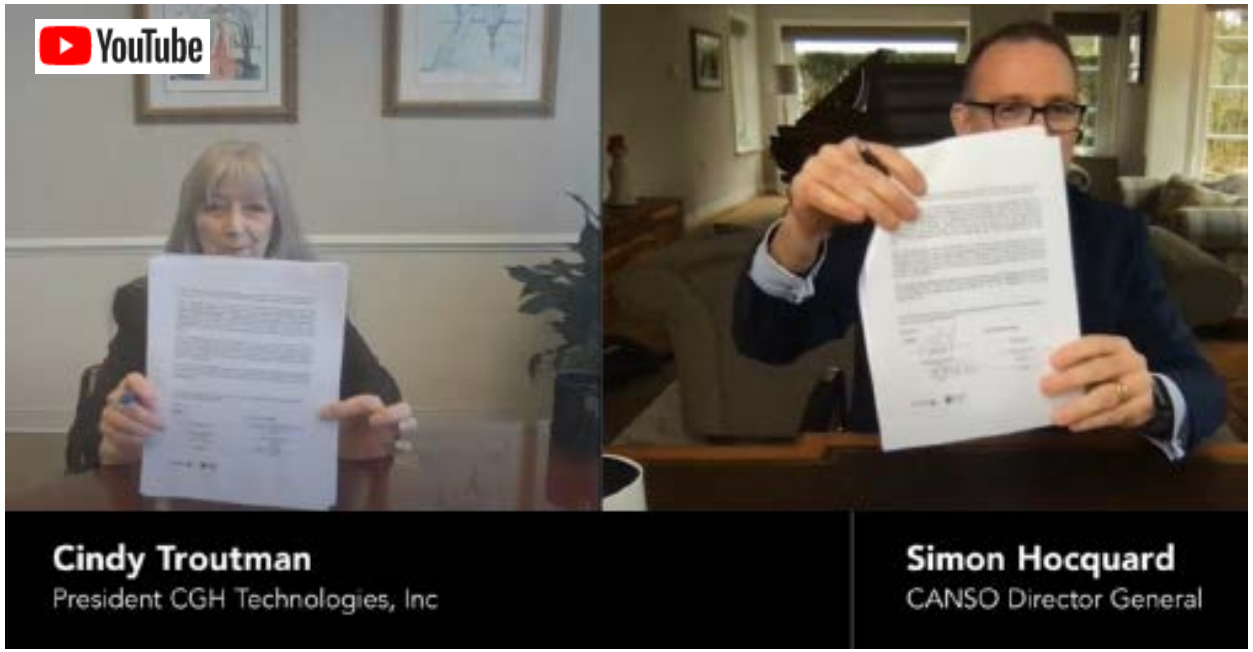
Introducing the CADENCE Operational Information System to ICAO MID ATFM TF

MIDANPIRG ATFM TF/5

25 - 27 May 2021

CANSO ATFM Data Exchange Network for Cooperative Excellence - CADENCE



CANSO and CGH Technologies virtual signing – CADENCE (March 22, 2021)

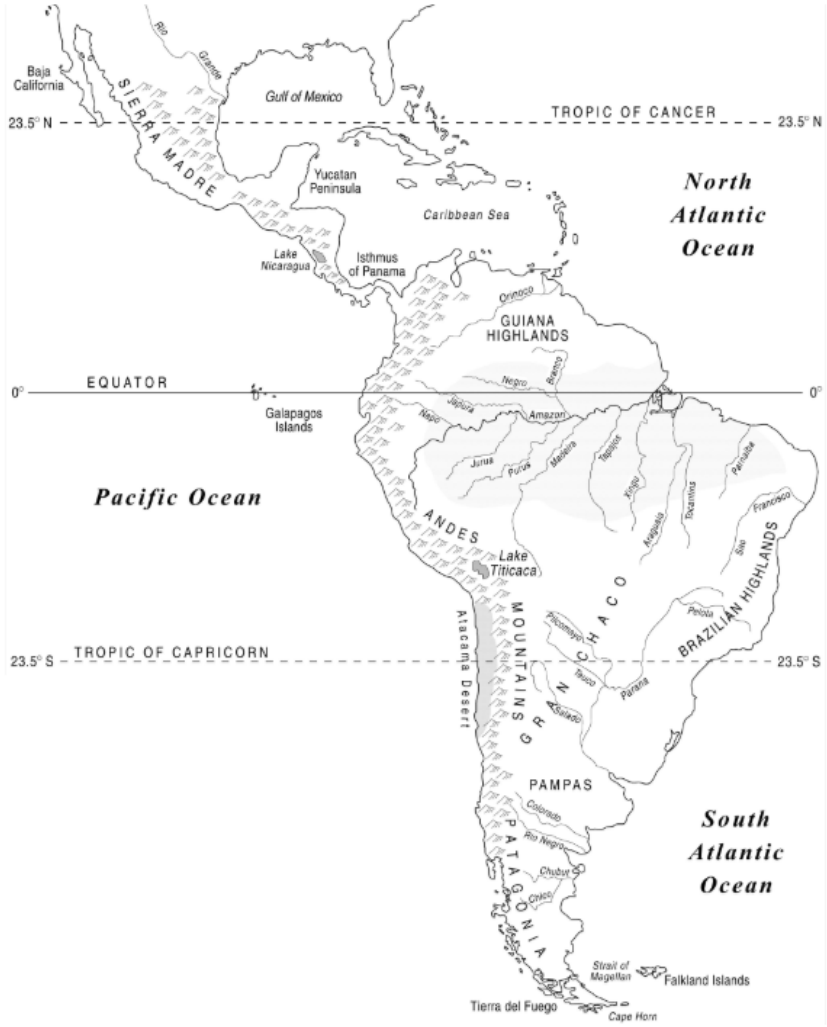
The agreement secures the provision of a purpose-built collaborative software platform based on the successful regional initiative CADENA (CANSO ATFM Data Exchange Network for the Americas).

CADENCE will enhance ANSPs CDM capability by:

- sharing information on factors affecting airspace demand and capacity
- facilitating enhanced situational awareness
- engaging all stakeholders in the development of collaborative approaches to optimise air traffic

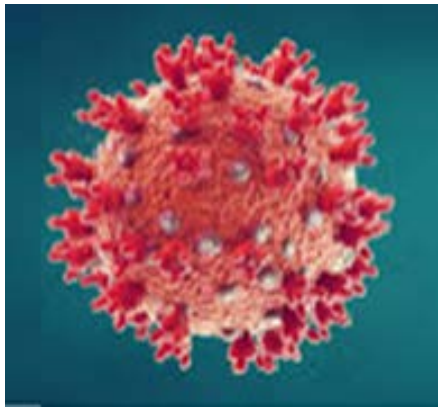
Background: CADENA – Building ATFM/CDM in Latin Americas and Caribbean Region

- 2016 Jun – Established
- 2016 Dec – Started regional ATFM/CDM Operational Planning Web Conferences
- 2017 Aug – Initial CADENA Operational Information System (OIS) launched



CADENCE platform is based on CADENA OIS v3.2 (launched in Oct 2020)

The Value of Information Exchange



- CADENA has proven the CADENA OIS web application is an effective means to exchange information
- The value of information exchange and collaboration is most needed during irregular situations
- Achieved reduction of MITs, CO^2, and airlines' operational cost

OIS Benefits – Examples

Qualitative Benefits - understood intuitively

Quantitative (monetary) Benefits

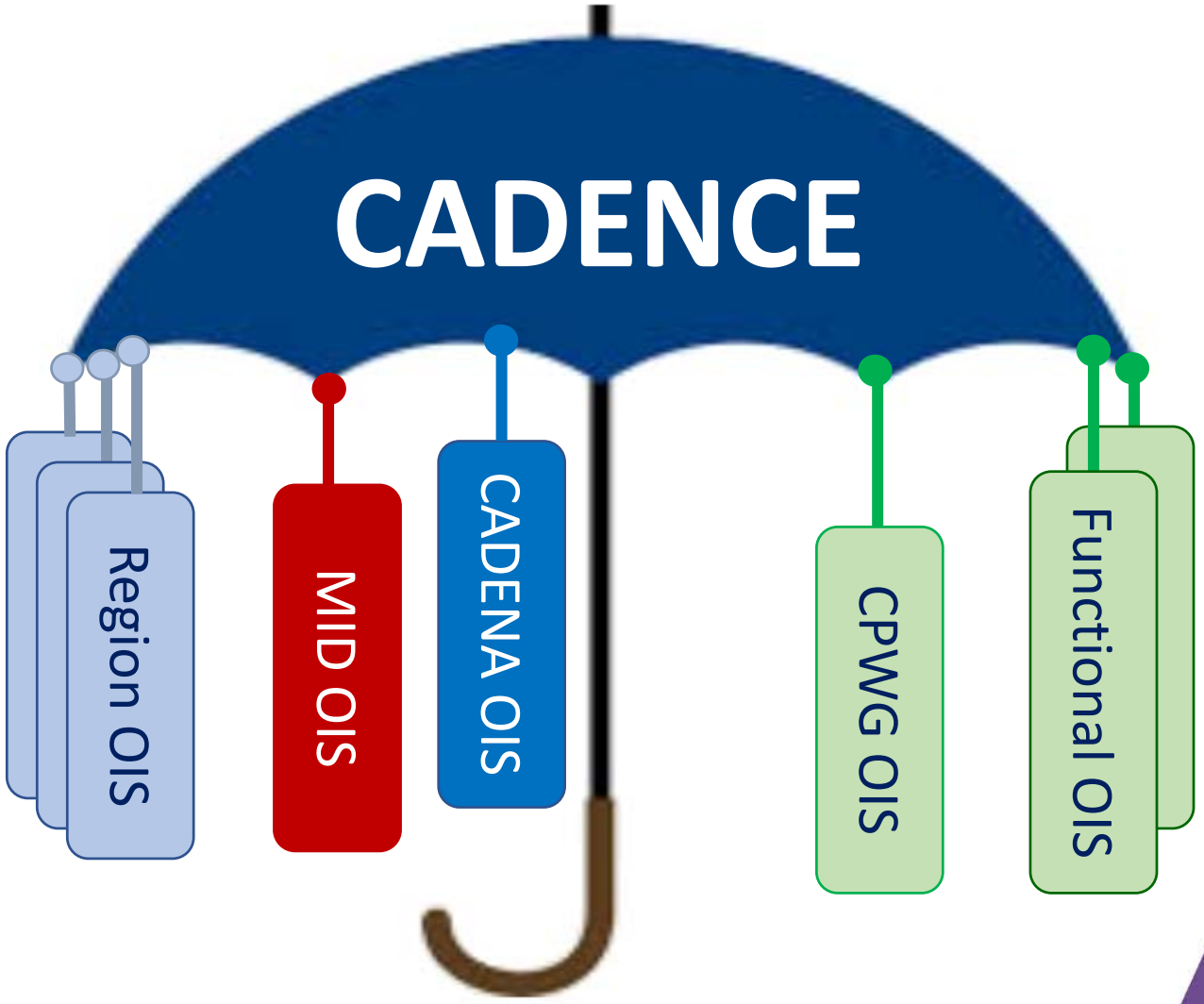
- UAL - Hurricane Maria Recovery Operation Case Study – $1.0M – $5.4M
- JBU - Return Home from Hurricane Maria Case Study – $182.0K
- AAL - Jamaica Loss of Radar Surveillance Case Study – $225.0K
- CPA - Jamaica Loss of Radar Surveillance Case Study – $175.5K
- UAL - Colombia Loss of Satellite Comm Case Study – $192.0K

Numbers in this briefing should not be interpreted literally, however, the **savings achieved by stakeholders are real**.

CADENCE Implementation in MID

CADENCE will:

- Complement ATFM/CDM efforts in MID region
- Provide the base OIS capabilities to MID region
- Support MID region to form its OIS implementation group
- Promote and support the usage of the regional OIS by MID ANSPs, airspace users, airports, and other aviation stakeholders



What Information Exchange can the CADENCE OIS Support?

Baseline OIS capabilities

- ATFM Daily Plan
- Regional ATFM Measures
- Regional Advisories
- Airport Delays
- Reroute Options Database
- Active Reroutes
- Contingency Forms
- Airport/Airspace Capacity

MID-specific OIS capabilities

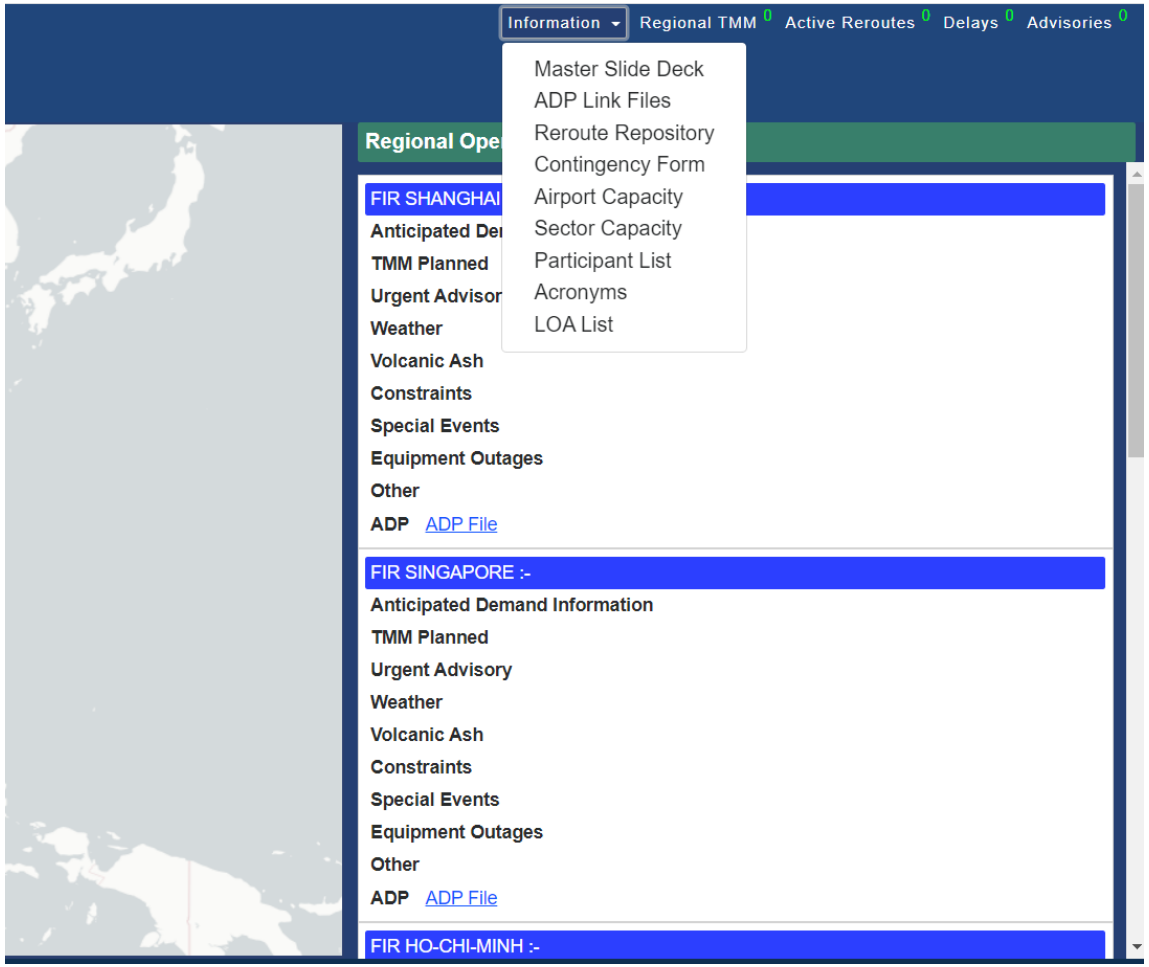
One way to do this:

Use the baseline OIS capabilities to enhance regional communication and information exchange

Another way:

Prepare the capability specifications and build / add new capabilities

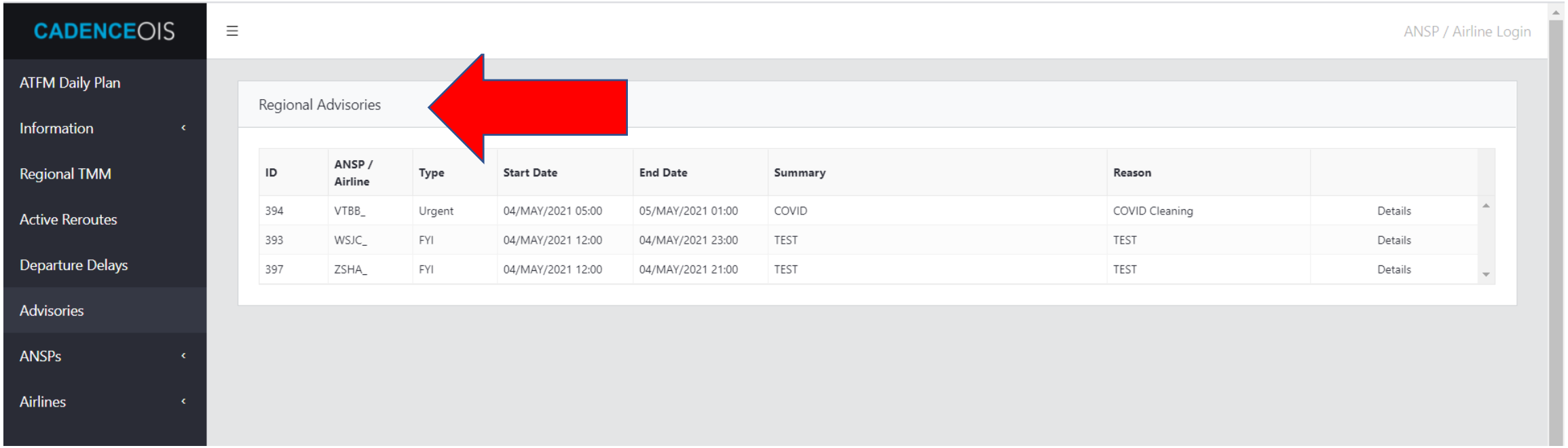
CADENCE OIS Platform Offered by CANSO and CGH



The CADENCE OIS offers participating ANSPs and airlines the capability to quickly share a wide variety of operational information.

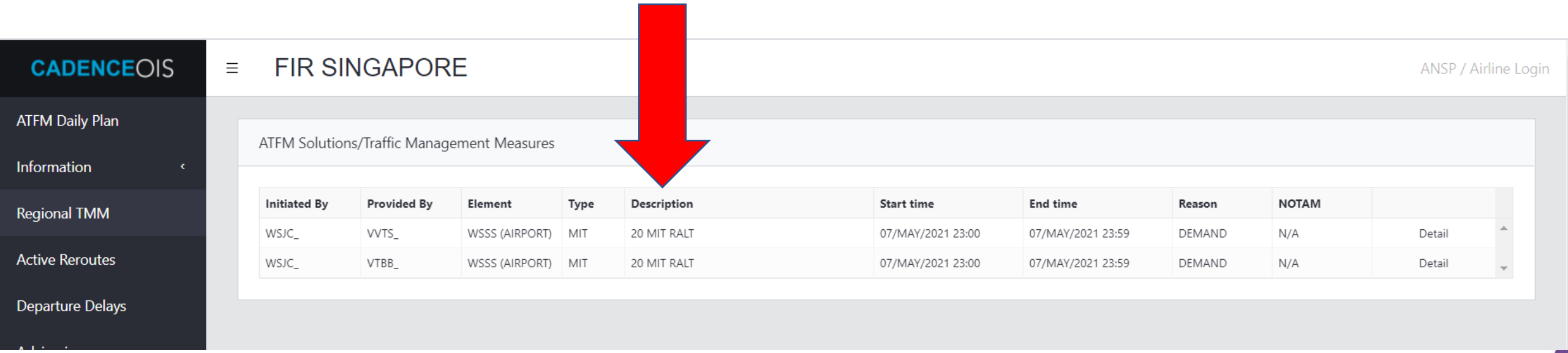
For example:

CADENCE Platform: Advisories



- Urgent Advisories regarding C/N/S outages, earthquakes, job actions, etc.
- This enables the rapid exchange of operational information among stakeholders, especially when unusual events occur

CADENCE Platform: Regional ATFM Measures

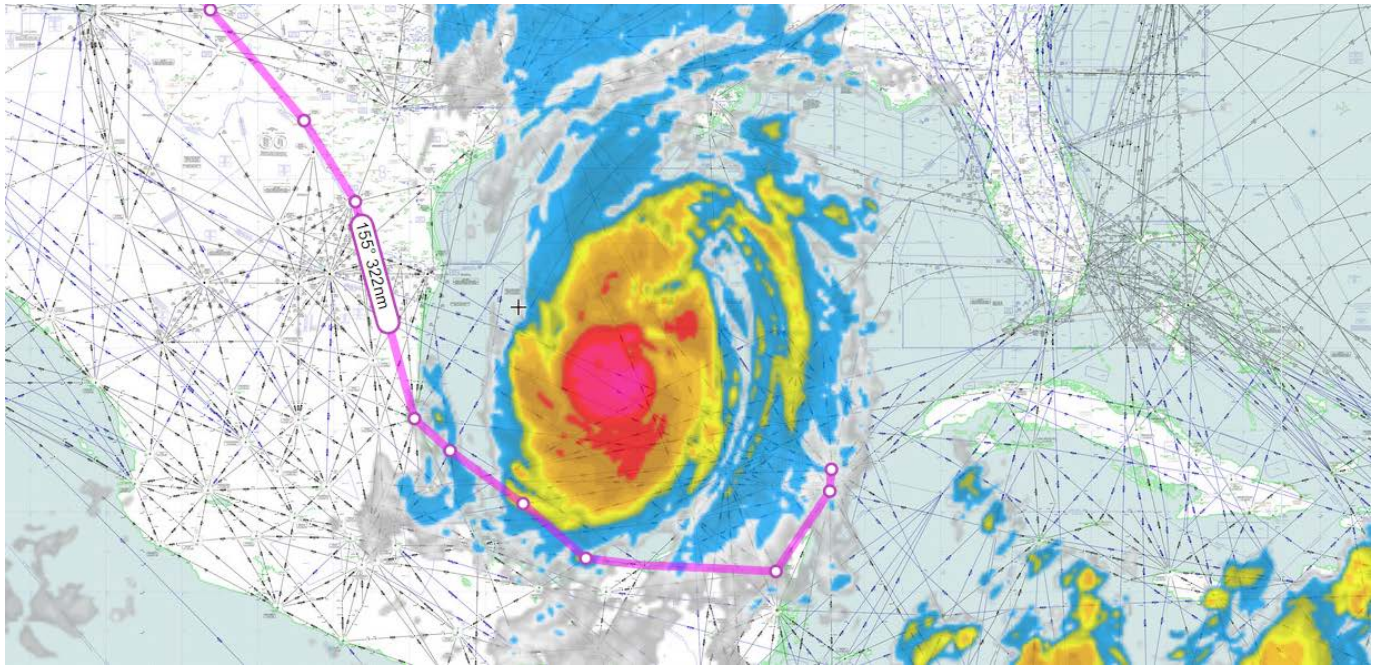


- ATFM Measures, such as miles-in-trail, that have been implemented in the region can be entered and displayed for all stakeholders to see
- This enables common situational awareness regarding ATFM measures among stakeholders

CADENCE Platform: Chat

- A Chat feature exists that allows participating stakeholders to quickly ask, and answer, operational questions

CADENCE Platform: Reroute Requests



- Reroute requests can be communicated by airlines to ANSPs in order to avoid a major weather disruption
- This enables airlines to properly flight plan for reroutes during significant weather events and enables ANSPs to manage sector volume during weather events that require reroutes

CADENCE Offers

- Visit CADENA Weekly Web Conference
- CADENA OIS Users Manual
- Webinar to demonstrate CADENCE OIS platform tailored for MID region

If MID ATFM TF decides to implement a regional OIS

- Baseline CADENCE OIS platform tailored for MID region
- Baseline CADENCE OIS User's Manual
- Training to use OIS
- Consulting support to implement CADENCE baseline OIS related functionalities

Questions?

Thank you!

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