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Third Meeting of Rapporteurs of the North American, Central American and Caribbean Working Group

Tercera reunión de relatores/as del Grupo de Trabajo de Norteamérica, Centroamérica y Caribe

NACC/WG/RAP/03

ICAO

Air Traffic Flow Management (ATFM)

Task Force



ATFM TF Background

- ✓ TF established in ANI/WG/1 in 2013
- ✓ Objective: work collaboratively and develop a regionally interoperable ATFM framework in the NACC consistent with ICAO Doc 9971

ATFM TF Progress in last 12 months

- ✓ Monthly web conference meeting held
- ✓ Collaborative Decision Making (CDM) online workshop available at <https://tfmlearning.faa.gov/tfm-training/atfm-basics/index.html>
- ✓ ATO ATCSCC Virtual Air Traffic Flow Management Workshop held in January 2025 with about 300 participants, including many from the Western Hemisphere. ANSPs and Flight Operators along with meteorologist and other aviation related organizations.

HIRO/NeoSpace 1

- ✈ High-Intensity Runway Operations (HIRO)
- ✈ Project NeoSpace 1
- ✈ Both are projects that Josue has info on, and we will have to wait until he is able to share the details.

Performance Measurement

ATFM Performance Measurement: Monthly taskforce meetings have identified Caribbean Performance Indicators (CARPI) that are appropriate for regional use

KPI	Name	Explanation	Data Source
CARPI 01	Aerodrome Flight Counts	Count of IFR Arrivals and Departures at an Aerodrome for day, month and year periods	ATC/ATFM/Billing System
CARPI 02	Airspace Flight Counts	Number of flights controlled in an FIR or Sector for day, month and year periods	ATC/ATFM/Billing System
CARPI 03	Aerodrome type of operation count	Group the number of Arrival and Departures at an Aerodrome into domestic and international flights	ATC/ATFM/Billing System
CARPI 04	Airspace type of operation count	Group the number of flights into domestic and international flights	ATC/ATFM/Billing System
CARPI 05	Aerodrome Flight Trends	Compare CARPI01 and 03 against various baselines to identify trends. Baselines could be before and after pandemics, capability improvements, investment projects etc.	ATC/ATFM/Billing System
CARPI 06	Airspace Flight Trends	Compare CARPI02 and 04 against various baselines to identify trends. Baselines could be before and after pandemics, capability improvements, investment projects etc.	ATC/ATFM/Billing System
CARPI 07	Workload per Aerodrome Flight	Quantify the number of aerodrome operations divided by the number of operational ATCOs in the Tower and/or TMA	ATC/ATFM/Billing System/HR Systems
CARPI 08	Workload per Airspace Flight	Quantify the number of flights in a specific airspace divided by the number of operational ATCOs in the ACC	ATC/ATFM/Billing System/HR Systems
CARPI 09	Workload Trend at an Aerodrome	Compare the workload per ATCO before and after events such as technology implementation, significant changes in traffic, special events or other system changes	ATC/ATFM/Billing System/HR Systems
CARPI 10	Workload Trends in Airspace	Compare the workload per ATCO before and after events such as technology implementation, significant changes in traffic, special events or other system changes	ATC/ATFM/Billing System/HR Systems

ATFM TF Deliverables and Results

CARPI Next Steps – create examples and collect current efforts to further each State/ANSP's understanding and ability to quantify and use each CAR Performance Indicator.

The ATFM taskforce will continue to develop explanations and examples as well as case studies

ATFM TF Deliverables and Results

- ✓ The ATFM taskforce continues to support, promote and utilize CADENA capabilities and resources for Cross Border, Regional ATFM implementation
 - Hurricane Planning, real-time mitigations, CDM updates (including flight operators), review and improvement
 - Other contingencies as they occur (power, CNS outages, staffing and equipment constraints, runway availability, etc.)
 - CADENA CDM support for special event planning, execution and post-event evaluation

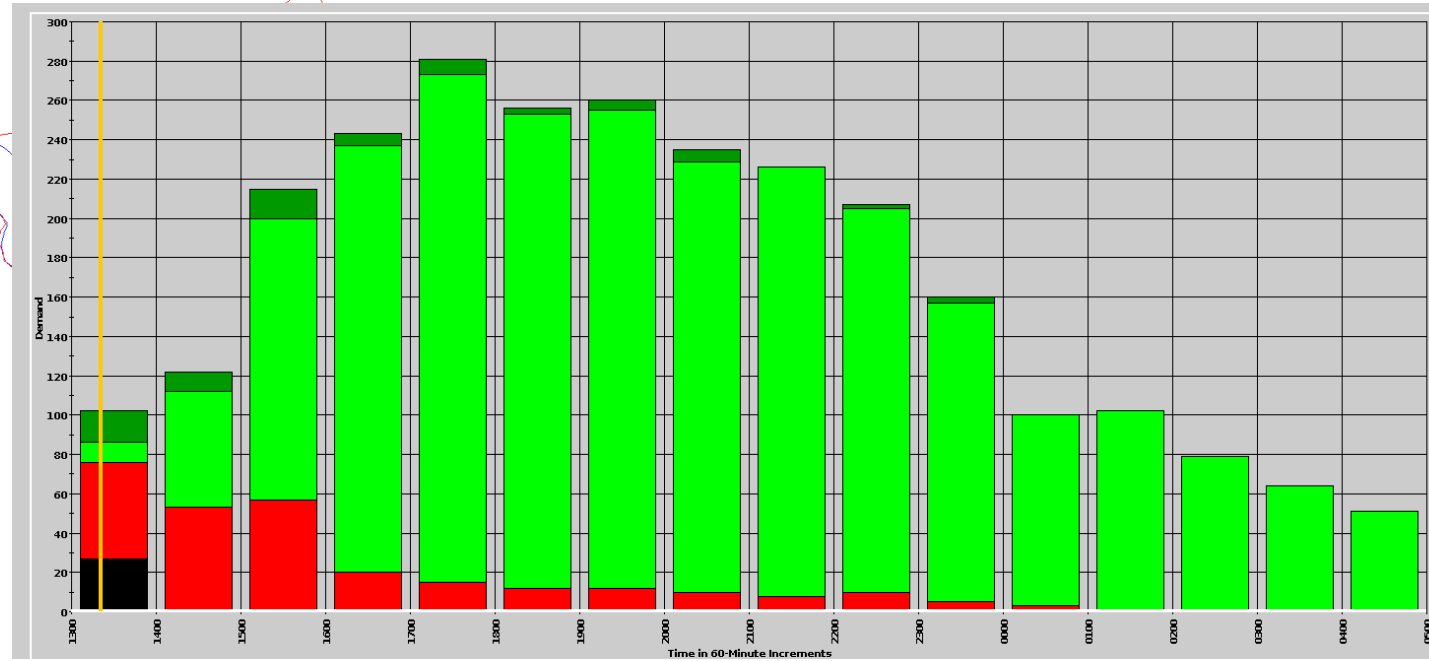
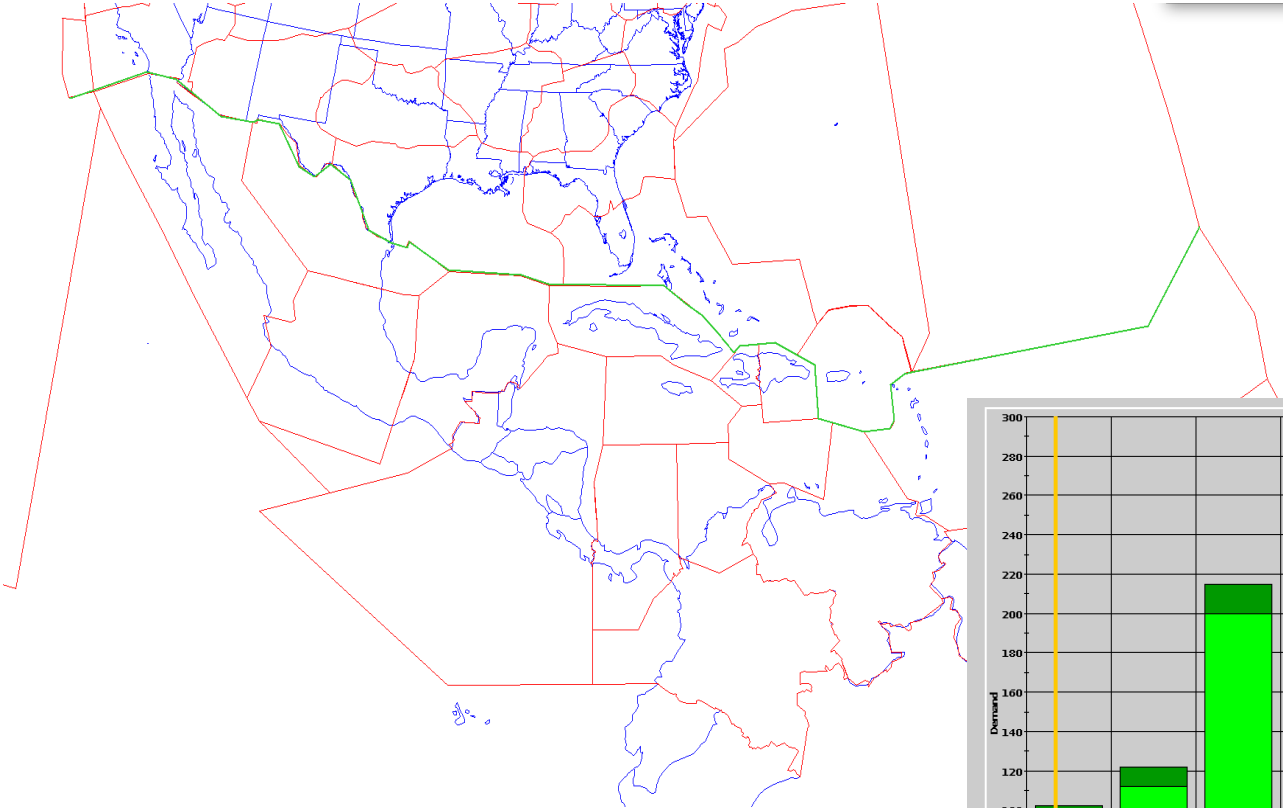
ATFM TF Work Programme priorities

- ✓ Improve capacity to conduct Pre-Event planning and Post-Event data driven analysis
- ✓ Improve seasonal planning review capabilities
- ✓ Continue Collaborative Decision-Making outreach via virtual workshops.
- ✓ Continue efforts to enable ANSPs to connect to a basic ATFM platform for real-time demand visualization and awareness.

Why Regional ATFM ? – 1,002,074 flights a year

NACC/WG/RAP/3

ICAO



Demand Data Sharing

Current Airport and Airspace demand sharing is occurring from the ATO ATFM system to the following States/ANSPs:

Mexico, Jamaica, Cuba, Dominican Republic, COCESNA and most recently added, Bahamas

Most datasets include an hourly count by Airport and Sector

Also includes detailed demand by flight

Piarco and Columbia are also interested.

What do some do with the info? Jamaica and Dominican Republic make daily ATFM decisions. Can the information be leveraged by others to improve ATFM?

ATFM TF Future Work Programme priorities

- ✓ Improve Pre-Event Planning and coordination, collaboration with stakeholders
- ✓ Improve Post-Event Analysis. An example is lesson learned from the T-20 Cricket Event. Key takeaway, have the plan ready to implement, then use real time data to determine if the need exists to implement the mitigations.
- ✓ Improve Seasonal Review Capability with stakeholders.
- ✓ Utilize CADENA for upcoming sporting events in 2025, 2026 and 2028

ATFM TF Conclusions and Recommendations

- ✓ The ATFM TF will continue to support the region in its ongoing evolution toward better strategic decision making
- ✓ The ATFM TF will continue to advance performance measurement in the region
- ✓ The ATFM TF continues to encourage and promote the use of the CANSO Air Traffic Flow Management Data Exchange Network for the Americas (CADENA) platform as a mechanism to facilitate data sharing and promote a common situational awareness that is vital to the safe, efficient, and harmonized flow of air traffic.

Automation systems in our region

State	ATC System (Billing)	FMU/ATFM System
Bahamas	Indra	
Canada	Own Design (CAATS)	FMU/TFMS (Partial)
COCESNA	Indra	FMU/Own Design
Cuba	Own Design	FMU
Curacao	Raytheon (Indra in 2028)	FMU
Dom Rep	Thales TopSky	FMU/Harmony
Haiti	Thales in 2025	FMU
Jamaica	Thales TopSky	FMU
Mexico	Thales TopSky/SIAAT	FMU/TFMS (partial) / SICOF
Trinidad & Tobago	Leonardo	FMU
USA	Own Design (ERAM)	FMU/Own Design (TFMS)

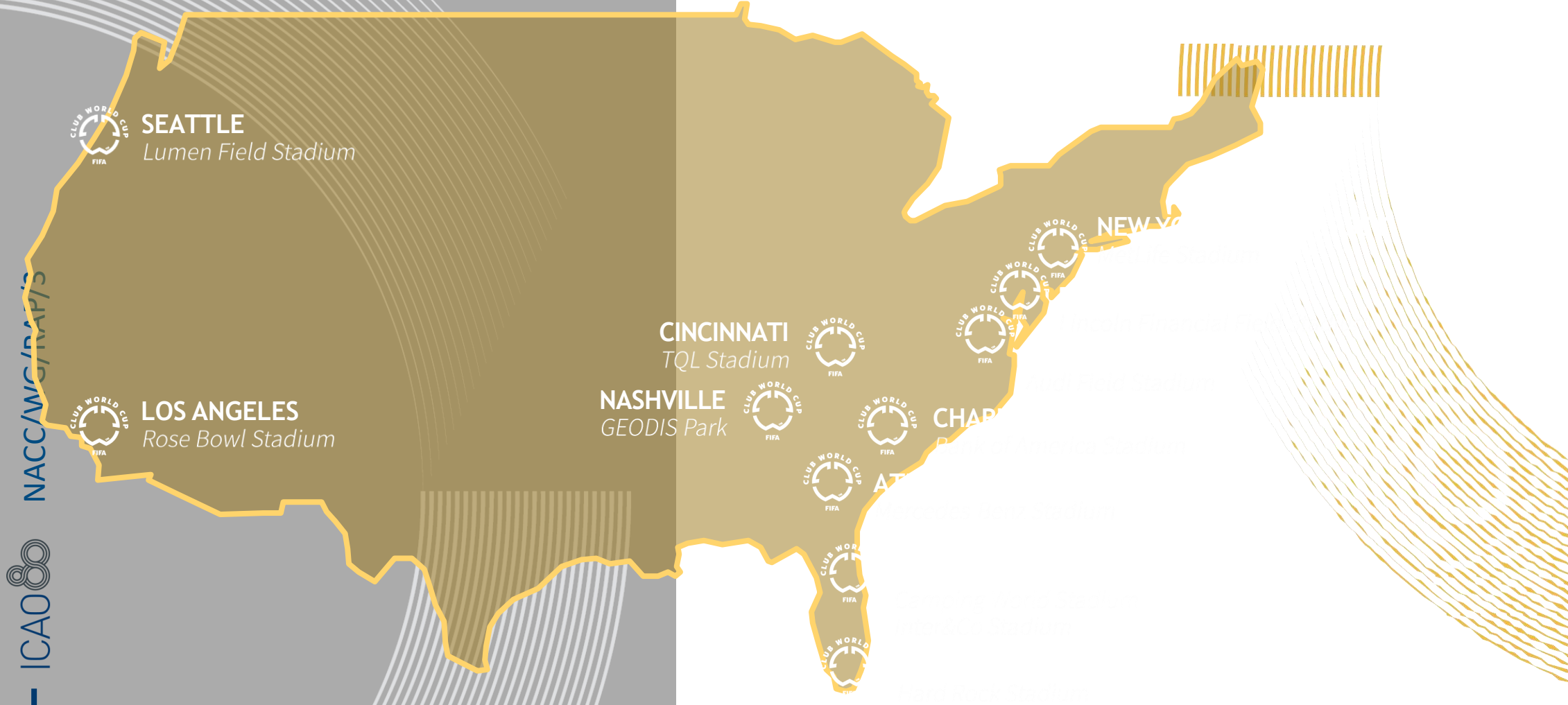
ATFM TF Future Work Programme priorities

Task force will support planning for major North America sporting events:

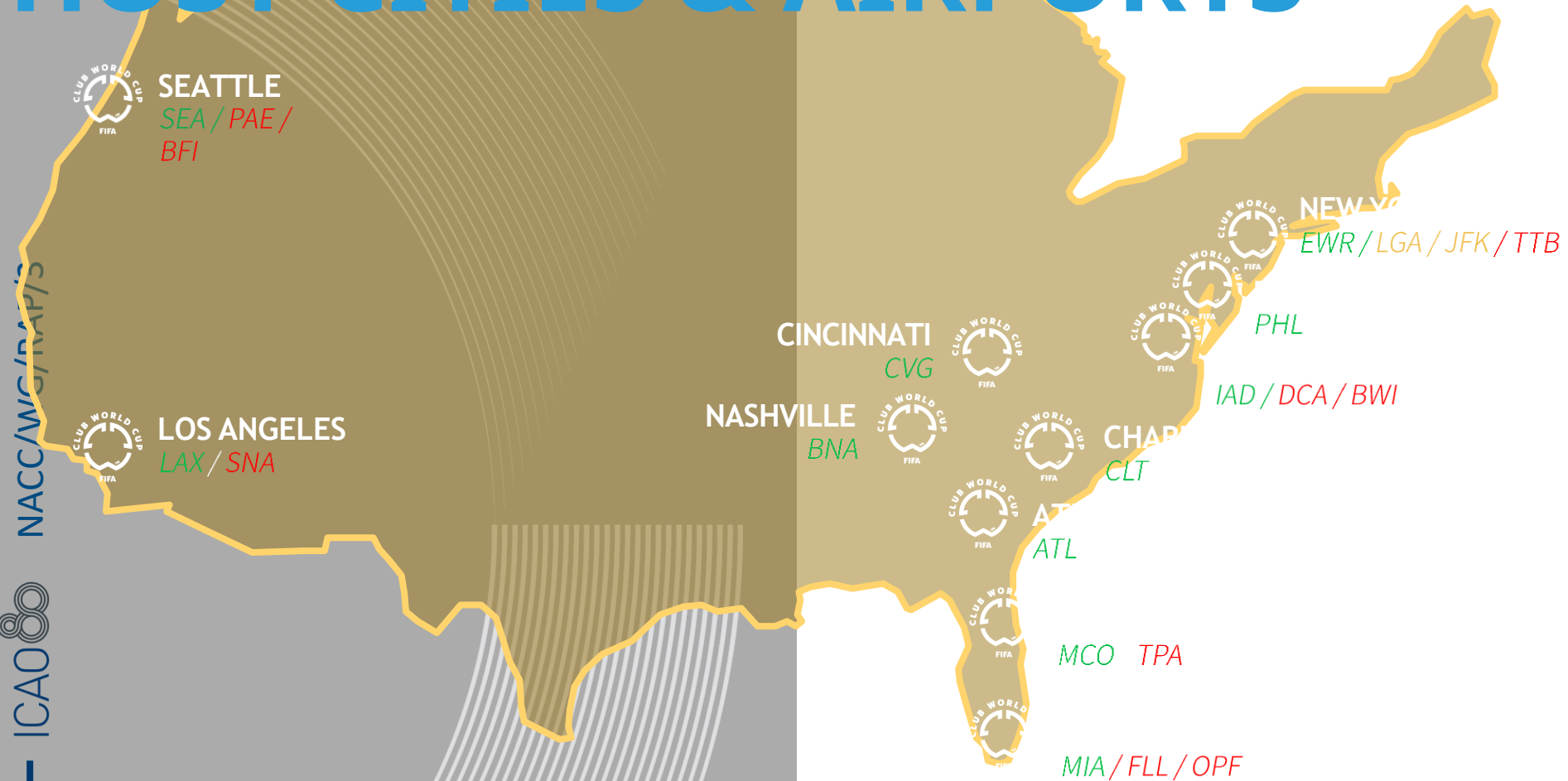
- 2025 – FIFA Club World Cup simultaneous with CONCACAF Gold Cup
- 2026 – FIFA Men's World Cup which will be held in three states within the region.
- 2028 – Los Angeles (and other locations) Summer Olympics

CADENA will be a key tool for TMM collaboration, communication and support for the increased flows expected for these events

HOST CITIES & STADIUMS



HOST CITIES & AIRPORTS



Confirmed
TBC
No Services

TEAM BASE CAMPS MAP



FCWC 2025 AND TIMELINE

FCWC25 DRAW

DECEMBER 5TH, 2024

- The event will happen in Miami at a TV studio
- 100 people invited
- MIA main airport to be used for arrivals & departures

FCWC25 TEAM SEMINAR

MARCH 15-25, 2025

- The event will happen at the Biltmore Hotel
- All the 32 Clubs representatives will be invited
- MIA main airport to be used for Arrivals & Departures

FCWC25 TOURNAMENT

JUNE 15 – JULY 13, 2025

- 32 Clubs
- 12 Stadiums
- 11 Host Cities

32 TEAMS QUALIFIED



Seattle Sounders



CF Monterrey



Club León



CF Pachuca



Inter Miami CF



SE Palmeiras



Botafogo



CR Flamengo



Fluminense



River Plate



Boca Juniors



-CONMEBOL-



Chelsea FC



Real Madrid CF



Manchester City FC



Borussia Dortmund



FC Benfica



FC Bayern München



Paris Saint-Germain



FC Internazionale



FC Porto



Juventus



Club Atlético de Madrid



FC Salzburg



Al Ahly



ES de Tunis



Wydad AC



Mamelodi Sundowns



Al Ain



Urawa Red Diamonds



Ulsan HD FC



Al Hilal



Auckland City FC





Additional Info

Summer 2025 – Overlapping competitions

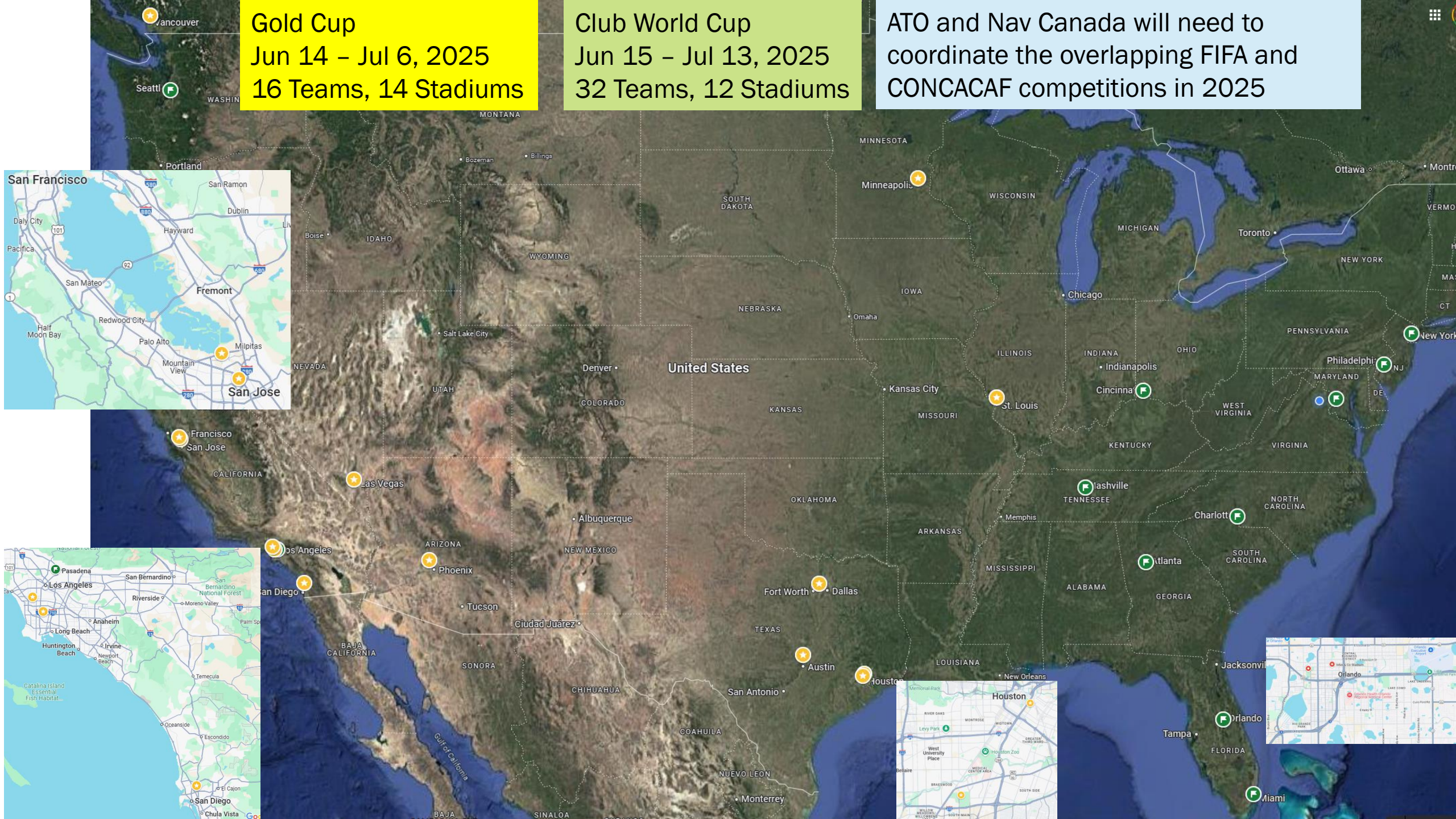


**Federal Aviation
Administration**

Gold Cup
Jun 14 – Jul 6, 2025
16 Teams, 14 Stadiums

Club World Cup
Jun 15 – Jul 13, 2025
32 Teams, 12 Stadiums

ATO and Nav Canada will need to coordinate the overlapping FIFA and CONCACAF competitions in 2025



Summer 2025 overlapping competitions, site details

Club World Cup		Gold Cup	
City	Stadium	City	Stadium
New York	MetLife – Semi Finals & Finals	Phoenix, AZ	State Farm Stadium
Philadelphia	Lincoln Financial	Carson, CA	Dignity Health Sports
Washington DC	Audi Field	Inglewood, CA	SoFi Stadium
Charlotte	Bank of America	San Diego, CA	Snapdragon Stadium
Cincinnati	TQL Stadium	San Jose, CA	PayPal Stadium
Nashville	GEODIS Park	Santa Clara, CA	Levi's Stadium
Atlanta	Mercedes-Benz	Minneapolis, MN	US Bank
Orlando	Camping World	St. Louis, MO	CityPark
Orlando	Inter & Co Stadium	Las Vegas, NV	Allegiant Stadium
Miami	Hard Rock	Arlington, TX	AT&T Stadium
Seattle	Lumen Field	Austin, TX	Q2 Stadium
Pasadena	Rose Bowl	Houston, TX	NRG Stadium - Finals
		Houston, TX	Shell Energy
		Vancouver, Canada	BC Place

2026 Men's World Cup



FIFA

- June 11 – July 19, 2026
- 48 Teams
- 16 Stadiums
- 3 Countries

Organizations and Points of Contact

Function	Canada	Mexico	United States
Regulator:	Transport Canada	Agencia Federal de Aviación Civil (AFAC)	Federal Aviation Administration (FAA)
Air Navigation Service Provider (ANSP):	NavCanada	Servicios a la Navegación en el Espacio Aéreo Mexicano (SENEAM)	Federal Aviation Administration (FAA) Air Traffic Organization (ATO)
Air Traffic Flow Management:	National Traffic Management Unit (NTMU) National Operations Center (NOC)	Sistema de Monitoreo, Administración y Regulación del Tránsito Aéreo (SMART)	Distributed among Air Route Traffic Control Centers and centralized at the Joint Air Traffic Operations Command (JATOC)

People	Canada	Mexico	United States
Air Traffic Flow Management:	Anik Bertrand, Naomi Fleury, Carly DiSera	Guillermo (Memo) Manzo	Mike Porcello, Vern Payne, Joe Dotterer, Chris Zurhorst, Jason Rooks, Chris Citrola
Regional Organization:		National (Mexico City) Astrid Jaimes, NE (Monterrey) Arturo Villela, West (Guadalajara) Oliver Ruiz	Jason Poole, Rich Ditto, Chris Tomlin, Shawn McClosky

FIFA Coordinators	Canada	Mexico	United States
Global Travel Lead: Barbara Schulte	Denise Champagne	Alfredo Jaimes	Joao Aguiar, East - Jennifer Nelson, West - Spencer Williams, Central TBD

Others

- Office of the US Secretary of Transportation: Ricki Wells, Brandon White
- DDSO and ATCSCC staff: Ernie Snyder, Scott Farrow, Louisa Ocasio, Sue Ashley, Brian OQuinn, Clint Smith, Gerald Quiroz
- ICAO Regional Officer: Josue Gonzalez
- CADENA: Joe Hof, Al Castillo

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FIFA World Cup 2026



HOST CITIES



FIFA World Cup 2026 Host Cities

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Note: Stadiums will have new sponsor names during the tournament

Canada

- ✓ **Toronto – BMO Field**
- ✓ **Vancouver – BC Place**

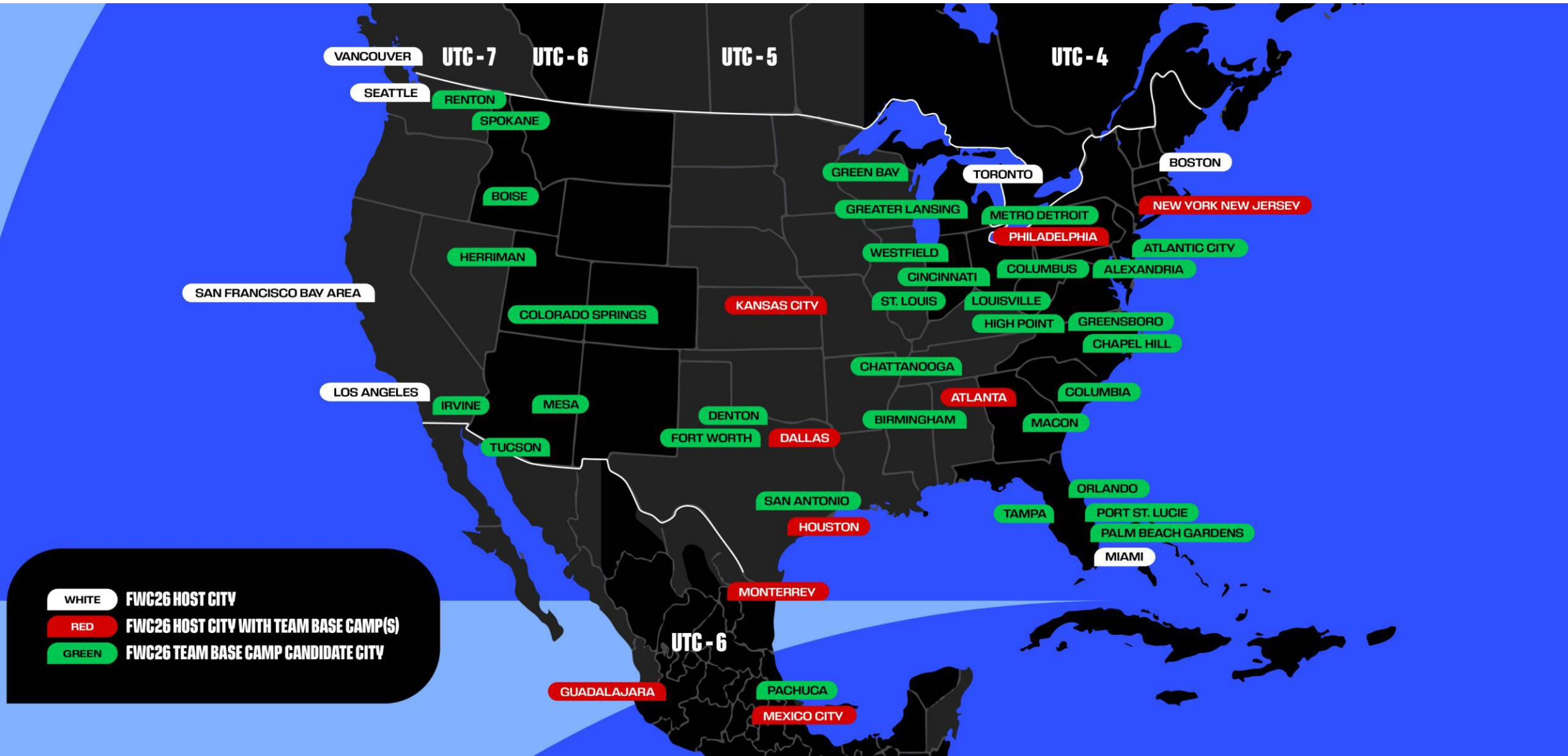
Mexico

- ✓ **Guadalajara – Estadio Akron**
- ✓ **Mexico City – Estadio Azteca**
- ✓ **Monterrey – Estadio BBVA**

USA

- ✓ Atlanta – Mercedes-Benz Stadium
- ✓ Boston – Gillette Stadium
- ✓ Dallas – AT&T Stadium
- ✓ Houston – NRG Stadium
- ✓ Kansas City – Arrowhead Stadium
- ✓ Los Angeles – SoFi Stadium
- ✓ Miami – Hard Rock Stadium
- ✓ New York/New Jersey – MetLife Stadium
- ✓ Philadelphia – Lincoln Financial Field
- ✓ San Francisco – Levi's Stadium
- ✓ Seattle – Lumen Field

FWC 2026 TEAM BASE CAMPS MAP



** more sites will be added through 2025 – this is the most up to date map

FIFA 2026 Key Players

City	Stadium	Airport Authorities	ATS Providers
Toronto	BMO Field	GTAA	Toronto ACC, CYYZ, NTMU, Transport Canada
Vancouver	BC Place	VAA	Vancouver ACC, CYVR, NTMU, ZSE, Transport Canada
Guadalajara	Estadio Akron	GAP	MMEX ACC, Guadalajara Apch Control, MMGL, SMARTMEX
Mexico City	Estadio Azteca	GACM	MMEX ACC, MMMX, MMSM, MMTO, SMARTMEX
Monterrey	Estadio BBVA	OMA	MMTY ACC, Monterrey Apch Control, MMTY, ADN, SMARTMEX
Atlanta	Mercedes Benz Stadium	Atlanta DOA	ZTL, A80, ATL, PDK, RYY, LZU, ATCSCC
Boston	Gillette Stadium	MassPort	ZBW, A90, BOS, ATCSCC
Dallas	AT&T Stadium	DFW, City of Dallas	ZFW, D10, DFW, DAL, ATCSCC
Houston	NRG Stadium	HAS	ZHU, I90, IAH, HOU, ATCSCC
Kansas City	Arrowhead Stadium	Kansas City DOA	ZKC, MCI, MKC, ATCSCC
Los Angeles	SoFi Stadium	LAWA	ZLA, SCT, LAX, BUR, VNY, LGB, SNA, ONT, ATCSCC
Miami	Hard Rock Stadium	Miami-Dade Aviation Dept.	ZMA, MIA, PBI, ATCSCC
NY/NJ	MetLife Stadium	PANYNJ	ZNY, ZBW, ZDC, ZOB, N90, EWR, JFK, LGA, TEB, HPN, ATCSCC
Philadelphia	Lincoln Financial Field	Philadelphia DOA	ZNY, ZBW, ZDC, ZOB, PHL, PNE, ATCSCC
San Francisco	Levi Stadium	City of SFO, SJC AP Comm, Port of Oakland	ZOA, NCT, SFO, OAK, SJC, ATCSCC
Seattle	Lumen Field	Port of Seattle	ZSE, SEA, S46, BFI, ATCSCC

FIFA 2026 Special Event Planning

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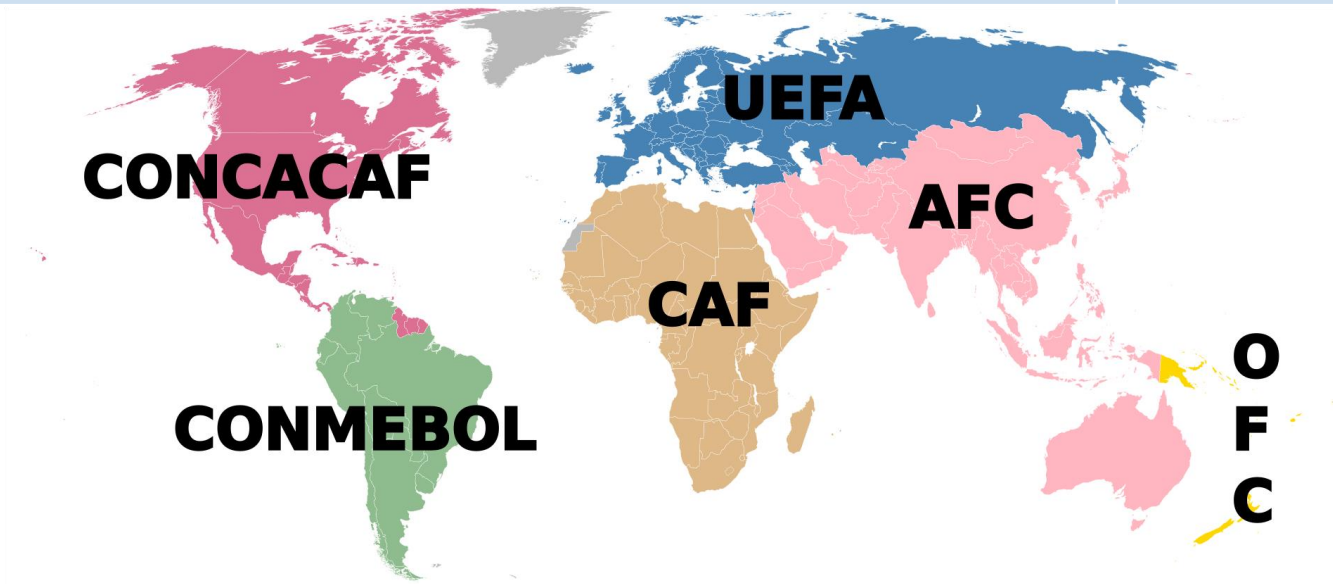
- Roadmap development to hit major milestones and initiate detailed planning as soon as the appropriate triggers are reached - Brainstorming

Initiative	Trigger
Airport construction planning/peak capacity	Ongoing
ATC peak capacity discussions	Ongoing
Possible security measures	As more details become available
ATFM measures such as Route Structure, GDP's and AFP's	1. Beginning now 2. When the pool play draw happens
Special Event Planning considerations such as NOTAMs for special arrival/departure procedures	Spring 2025
Flight Operator, IATA outreach	Now and at each trigger point.
FIFA outreach	Now
CADENA coordination	Ongoing

World Cup 2026 Qualification

Draw – Dec 2025

Confederation	Slots	Qualifying End Date
AFC (Asian Football Confederation)	8	November 2025
CAF (Confederation of African Football)	9	November 2025
CONCACAF (Confederation of North, Central America & Caribbean Football)	3 hosts + 3	November 2025
CONMEBOL (Confederación Sudamericana de Fútbol)	6	September 2025
OFC (Oceania Football Confederation)	1	March 2025
UEFA (Union of European Football Association)	16	March 2026
Playoffs (6 Team playoff consisting of 1 team from each confederation to determine last 2 slots)	2	March 2026



ATFM TF WP Suggested Action

The meeting is invited to:

- ☐ Evaluate the progress of the ATFM Task Force detailed in this paper; and
- ☐ Support the conclusions and recommendations





Thank You!