

# DRONE ENABLE



## *ICAO UAS/UTM/RPAS Updates*

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Technical Officer/ICAO RPAS Section

- DE 2022 - Outcomes
- DE 2023 RFI – Summary
- DRONE ENABLE 2023 Webinar Series
- UTM Framework - Summary
- UTM Framework – Edition 5 – Overview
- RPAS – SARPs Update

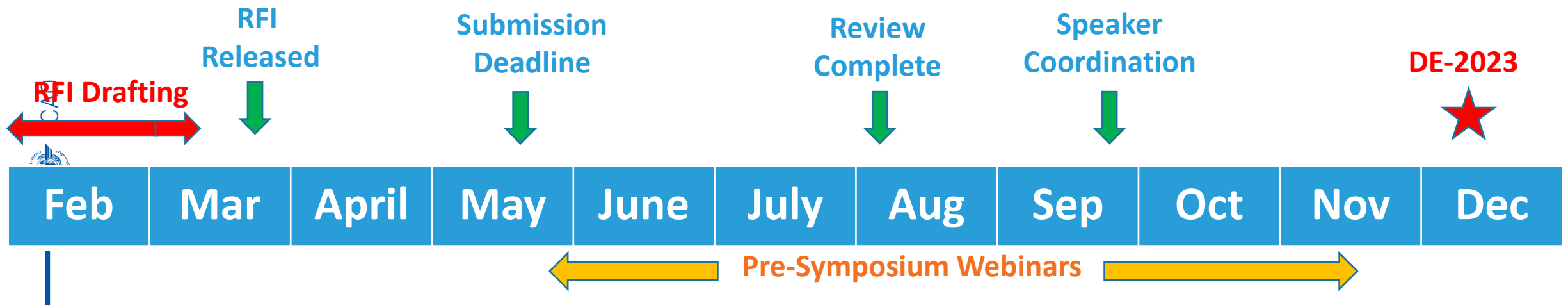
*Learning from the past for a better future*

- Panels
  - Facilitation Challenges & Environmental Impacts
  - Digital Road to UTM Implementation
  - Advanced Air Mobility – Initial Concept of Operations
- RFI Sessions
  - Results
- All sessions are available for viewing

- UTM requirements vary by State and local applications
- Strategic and tactical de-confliction
- Cooperative air traffic
- UTM development and implementation will be incremental
- UTM implementation convergence versus fragmentation

- Different use cases = different data tiers
- Standardization
- Data driven approaches
- Trust & Security - bake it in vs sprinkle it on
- Cross-pollination and integration of data across ATM and UTM

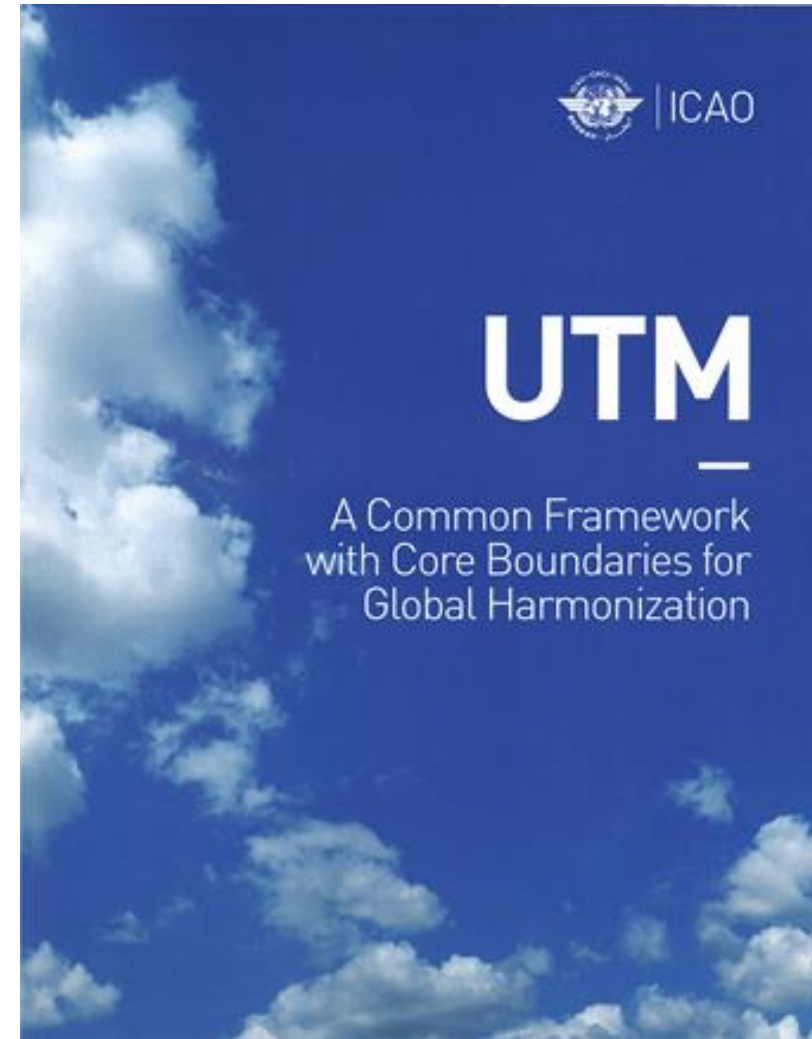
- Two problem statements identified
  - UAS/UTM CNSC requirements
  - AAM critical elements requiring harmonization
- 45 submissions received – top 16 selected



Date	Time	Topic
<i>30 May 23</i>	<i>10:00-11:30</i>	<i>UTM as an Enabler for Collaborative Operating Environments</i>
<i>18 Sept 23</i>	<i>10:00-11:30</i>	<i>UTM Financial Sustainability Strategies</i>
<i>14 Nov 23</i>	<i>10:00-12:30</i>	<i>UTM Deployment Best Practices and Lessons Learned Workshop</i>



- A framework and core capabilities of a “typical” UTM system
- High level UTM requirements and considerations
- Not a technical solutions document





- Foster common framework and harmonization of core UTM principles
- Maintain safety and minimize disruption to existing aviation system
- Support technological developments in UTM and UAS
- Provide safety-focused recommendations for UTM system development
- Address security and environmental risks
- Enable stakeholders to grow safely and efficiently

## **EDITION 1 (RELEASED)**

- Registration, identification, tracking
- Communications systems
- Geofencing-like systems
- Potential architectures

## **EDITION 2 (RELEASED)**

- UTM-ATM boundaries and transitions
- Information exchange between ATM and UTM

## **EDITION 3 (RELEASED)**

- UTM risk assessment/contingency procedures
- UTM service providers structure
- Separation and deconfliction in UTM

## **EDITION 4 (RELEASED)**

- UA performance requirements in a UTM environment
- UTM system certification requirements
- UTM in aerodrome environments

## **EDITION 5 (DRAFTED)**

- Experiences/Best Practices of UTM Systems and Services Deployments
- UTM Data Requirements

# RPAS SARP<sub>s</sub> DEVELOPMENT TIMELINES

	2020	2021	2022	2023	2024	2025	2026
Licensing			Applicable				
Airworthiness		Effective					Applicable
C2 Link (gen.)		Effective					Applicable
Operations					Effective		Applicable
SM					Effective		Applicable
C2 Link (techn.)						Effective	Applicable
DAA						Effective	Applicable
ATM						Effective	Applicable
Aerodromes							Effective & Applicable
Other	Meteorology, Facilitation, Accident investigation, AIM, Environment, Security, Dangerous Goods, Infrastructure funding/financing, Legal issues...						



Thank You!