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# DRONE ENABLE

## ICAO'S UNMANNED AIRCRAFT SYSTEMS INDUSTRY SYMPOSIUM

ICAO HQ, Montréal, Canada | 22-23 September 2017





- DRONE ENABLE - the industry talking to states/regulators
- This will not be business as usual
- This is an opportunity to change the future/dawn of a new renaissance in aviation
- We have a moral obligation to advance the industry



- Strategic and tactical comms needed between all actors
- Should use architectures and processes that already work
- Existing technology for the UAS available to support UTM
- Frequency spectrum issues must not be overlooked



## Stream 1 - Registration, Identification and Tracking

- UTM will feature many stakeholders interconnecting and redefining their roles
- Reasons: safety, security, privacy, financial
- Benefits: planning, de-confliction of UTM, interfacing needs from governments, data exchange – industry providers do in same language
- New technologies based on and leverage from existing technology
- Different methods for identification and Broadcast ID exist or are under development
- Different levels of complexity requires scalability
- Services may differ from State to State
- Regulations should not be technology prescriptive
- ICAO as enabler to harmonize protocols for global applicability



## Stream 2- Communications system

- Stakeholders are testing different products and the duration of these tests will determine time line for implementation
- Need to define or adapt standards for communications systems which are safety critical
- Need to work on the acceptable safety level and associated collision risk models
- Availability of accurate and validated data
- Need to move forward and continue to share best practices



## Stream 3 - Geofencing-like systems

### ~~Crawl, walk, run mode~~

- Design for Privacy, Security, Safety
- A range of global standards should be expected, and they should be efficient and affordable
- Good Geo-fencing like systems make good neighbors
- Data integrity and reliable avionics are both essential
- Design should consider ground and air concerns, not only on UAS
- One size doesn't fit all, define integrity level VS risks/ops/UAS
- Geo-fencing systems should be open and globally interoperable
- It should be agile and respond to emerging technology



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*Mark your calendars*

# UPCOMING EVENTS RELATED TO RPAS AND DRONES



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GANIS  
SANIS  
2017

- > Second Global Air Navigation Industry Symposium (GANIS/2)
- > Safety and Air Navigation Implementation Symposium (SANIS)

ICAO Headquarters, Montréal, Canada, 11 to 15 December 2017

# UTM, Outcomes of DRONE ENABLE, Operations above FL650 Commercial space

<https://www.icao.int/Meetings/GANIS-SANIS>





# Third Global Remotely Piloted Aircraft Systems Symposium (RPAS2018)

Chengdu, China  
10 to 12 September 2018



# DRONE ENABLE

## ICAO'S UNMANNED AIRCRAFT SYSTEMS INDUSTRY SYMPOSIUM

Chengdu, China

| 13 - 14 September 2018

Discover more

# Request for Information

## Announcement

### 31 January 2018



**International Civil Aviation Organization  
Unmanned Aircraft System  
Traffic Management (UTM)**

**Request for Information**


**Introduction:**  
ICAO recognizes that the challenge in integrating unmanned aircraft into the national airspace will be addressed by agreeing upon a globally harmonized, common framework. To ensure sound technical approaches to be used for conducting such a framework, the greater degree of scientific and technical research and development activities are being initiated as well as any national requirements for which consensus can be reached. The global aviation community will benefit from such research and development activities. ICAO will act as the global enabler of such research, activities and other advanced capabilities related to an incorporating a common regulatory framework to support integration of unmanned aircraft into national airspace. This activity is supported from ICAO's on-going work to build a global regulatory framework for the integration of remotely piloted aircraft systems (RPAS) to accommodate such systems into flight rules. Although no reference work for UTM, Member States have requested that ICAO serve as the global law aviation facilitator to assist with the challenge of unmanned aircraft systems (UAS).

**Problem statement:**  
Member States and experts have expressed interest in developing UTM to provide services for UAS operations, particularly in urban environments. A common agreement on the framework and core functionality of UTM will be developed through a common UTM working group and aviation industry involving manufacturers, service providers and end users to give safety and efficiency without disrupting the existing manned aviation system.

In that end, ICAO is seeking information from States, industry, academia or individuals that will assist in defining a framework for global harmonization, safety, and operational and cost feasibility of UTM. The goal of this global consultation is to develop a common agreement on a global UTM.

Any framework for UTM will include many components, three of which are fundamental and will therefore be addressed as a matter of priority:

All regulatory queries that which have a potential to lead into a law aviation facilitator should be **clear, concise and specific** in each U.S. is open to all and the nature of the common procedure system. It is intended to be an advisory document that will be used to assist in other technical or professional use. The document should also be clear.



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**THANK YOU!**