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# RPAS SARP's Development

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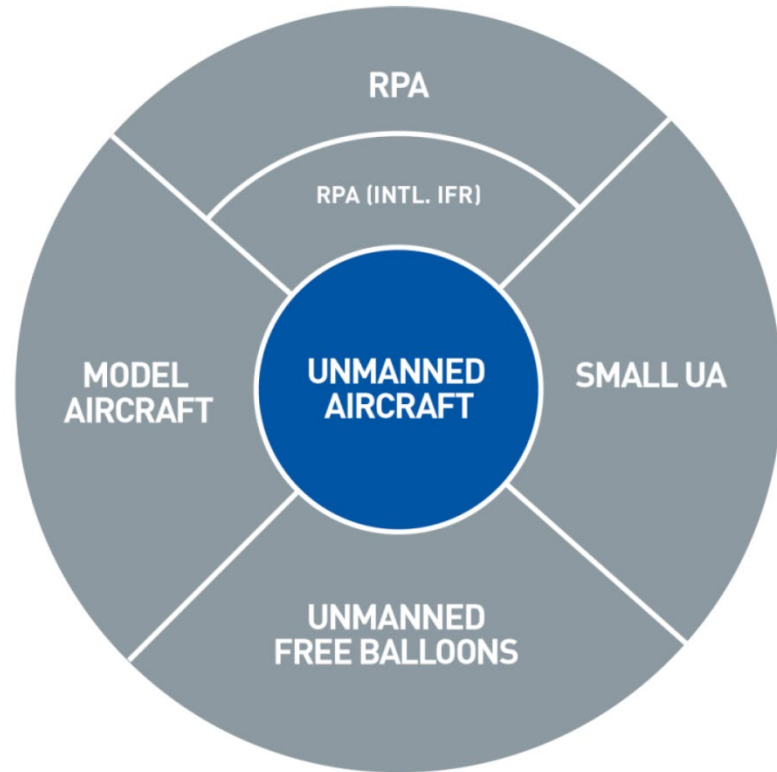




- Background on the ICAO SARPs development
- RPAS Panel organization
- RPAS Panel progress
- Specific updates:
  - Annex 8 (airworthiness)
  - Annex 10 (C2 Link)
  - Annex 10 (DAA)
  - Annex (operations)
  - ATM
  - Other work on SARPs Development



# RPA are aircraft



**Aircraft.** Any machine that can derive support in the atmosphere from the **reactions of the air** other than the reactions of the air against the earth's surface.

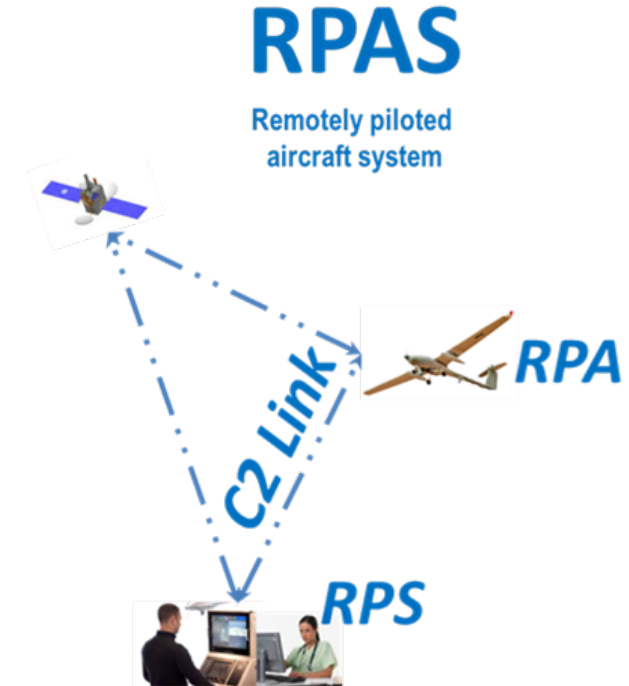
**Unmanned aircraft.** An aircraft intended to be operated with **no pilot on board**:

- **A remotely piloted aircraft (RPA)** is part of an **RPAS (system)**; piloted from a RPS
  - subset of RPA intended for **international, instrument flight rules (IFR)** operations; full regulatory **certification**
- **Small UA**: generally <25 kg (commonly “**drones**”)
- **Unmanned free balloons**: non-power driven, unmanned, lighter-than-air aircraft in free flight
- **Model aircraft**: scaled down version; recreational

# RPAS components

An **RPAS** consists of:

- One (1) **RPA**
- One (1) or more **RPS**
- **RPA and RPS** connected by **C2 Link** (in direct radio line-of-sight or BRLOS, such as via satellite)
- **other components** essential for flight, like manned aircraft, including:
  - ATC communications and surveillance equipment (radio coms; CPDLC; ADS-B; SSR transponder)
  - navigation equipment
  - launch and recovery equipment (e.g. catapult, winch, rocket, net, parachute, airbag)
  - flight control computer (FCC), FMS and autopilot
  - system health monitoring
  - flight termination system

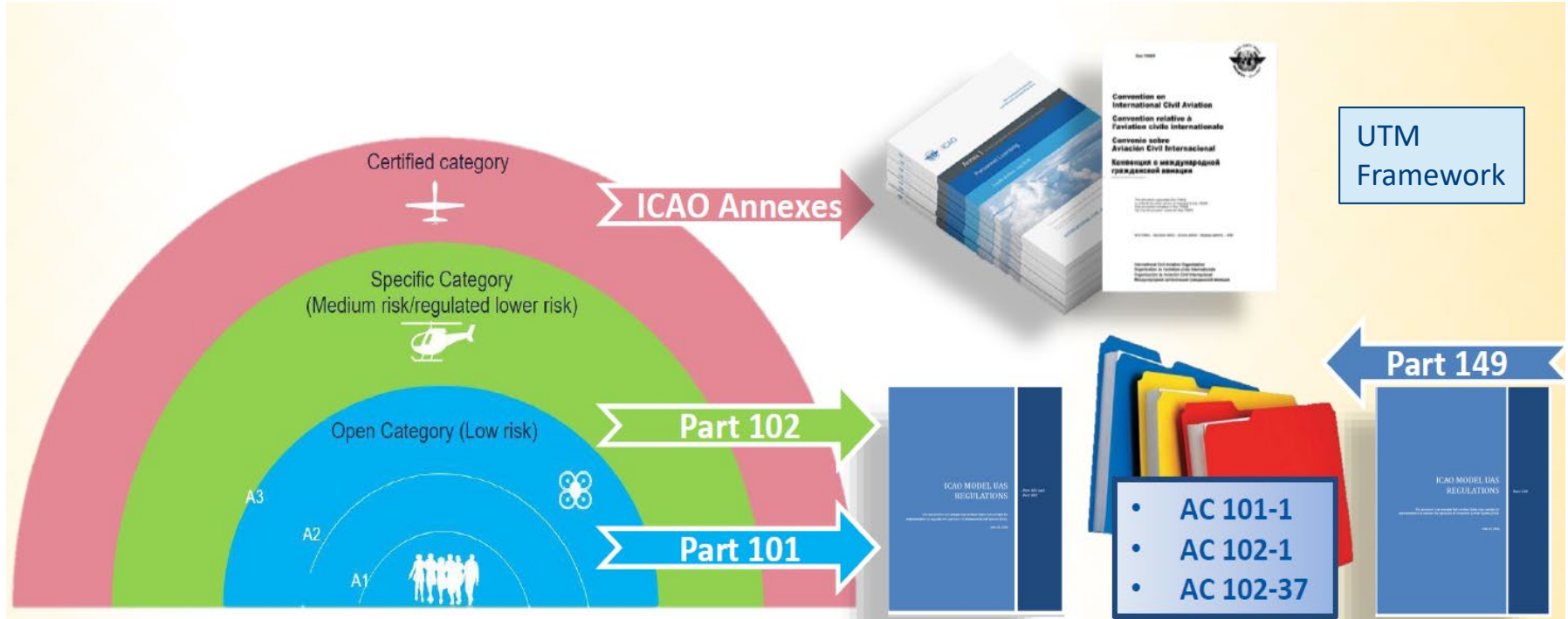




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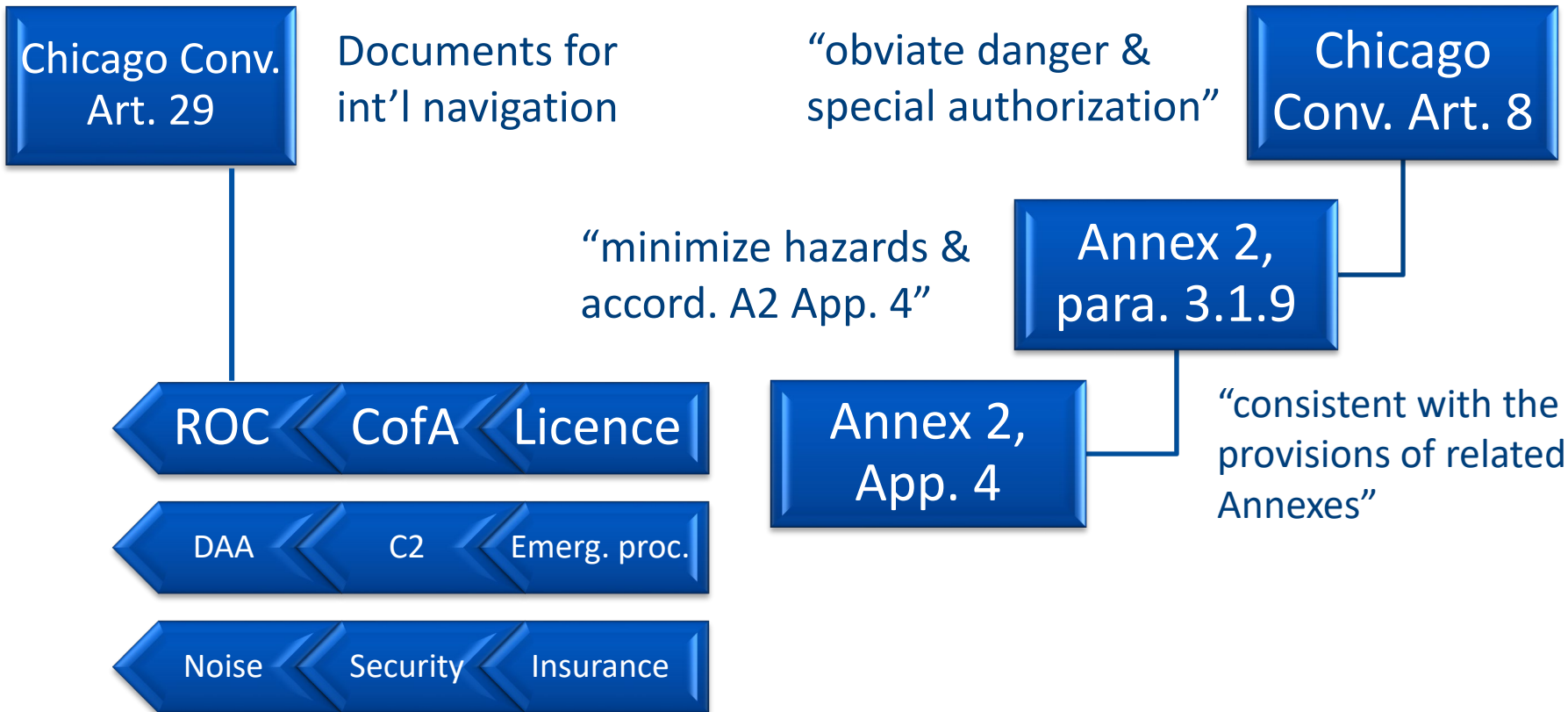
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# Scope of the ICAO work





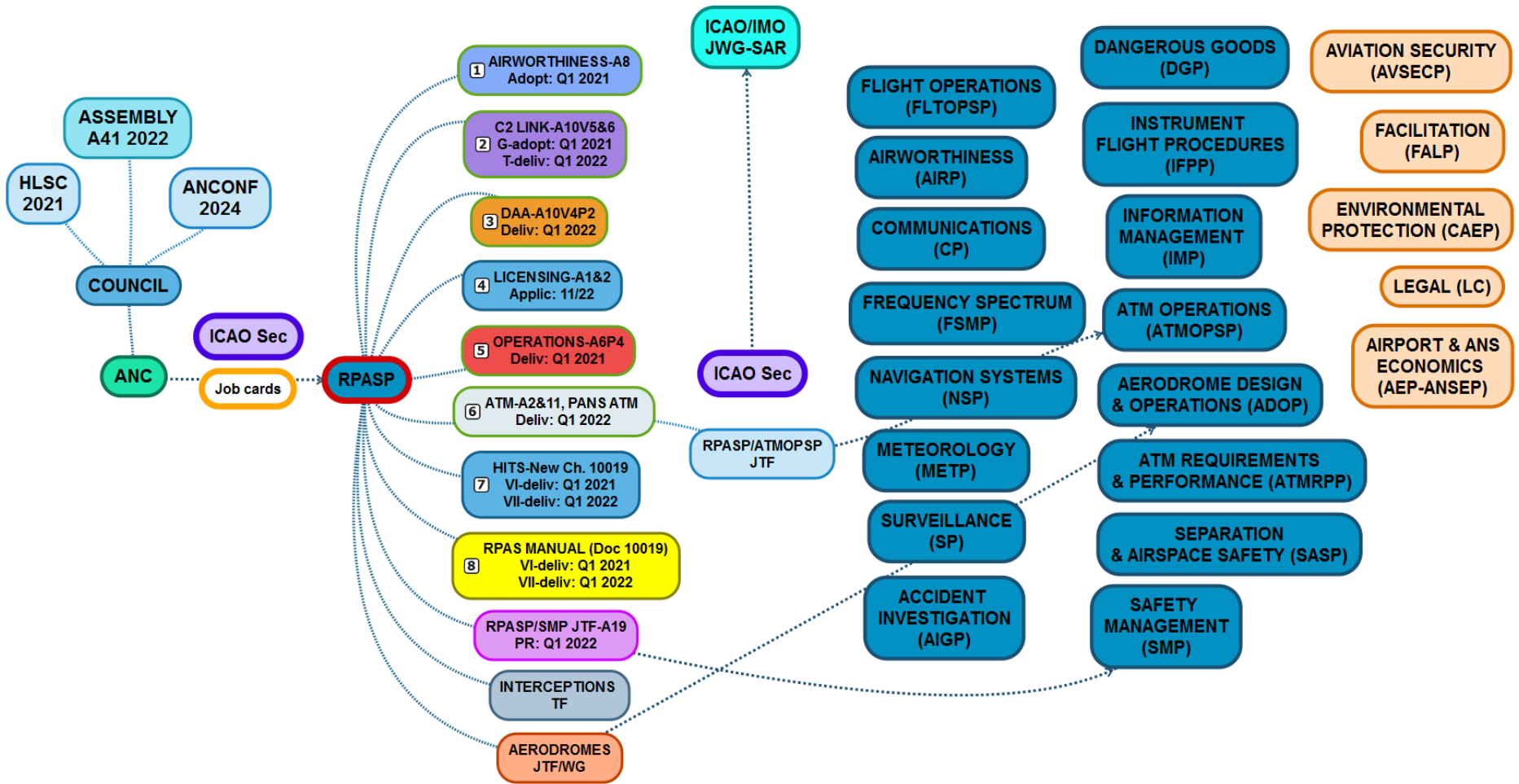
# Foundations of ICAO's mandate





# The RPAS Panel

- ICAO **RPAS Panel** brings together **regulators and industry**
- 26 States from all 6 regions, ensuring **geographical** representation and **diversity** of points of views/development stages
- Major aviation **industry** organizations: IATA, ACI, CANSO, EUROCONTROL, EASA, IFALPA, IFATCA, IAOPA, RTCA, EUROCAE, NATO, AUVSI, UVSI
- **RPAS panel** acts as a **focal point** and **coordinator** of RPAS work







- International operations
- Controlled airspace and aerodromes
- Global interoperability
  - RPA to operate alongside manned aircraft, as a predictable, cooperative airspace user: All **19 Annexes** affected
  - Priority given to **fundamentals** for **international** operations
    - » **Remote pilot licence** – adopted March 2018; applicable Nov. 2026 (Annex 1, Amdts 175 & 177)
    - » **Certificate of airworthiness** – adopted Q1 2021; applicable Nov. 2026 (Annex 8, Amdt 108)
    - » **C2 Link** – adopted Q1 2021; applicable Nov. 2026 (new Vol. VI to Annex 10 to & Amdt 90 to Vol. V, Annex 10)
    - » **RPAS operator certificate** – delivery Q1 2021 (new Annex 6, Part IV); applicable Nov. 2026



# ICAO RPAS Timelines

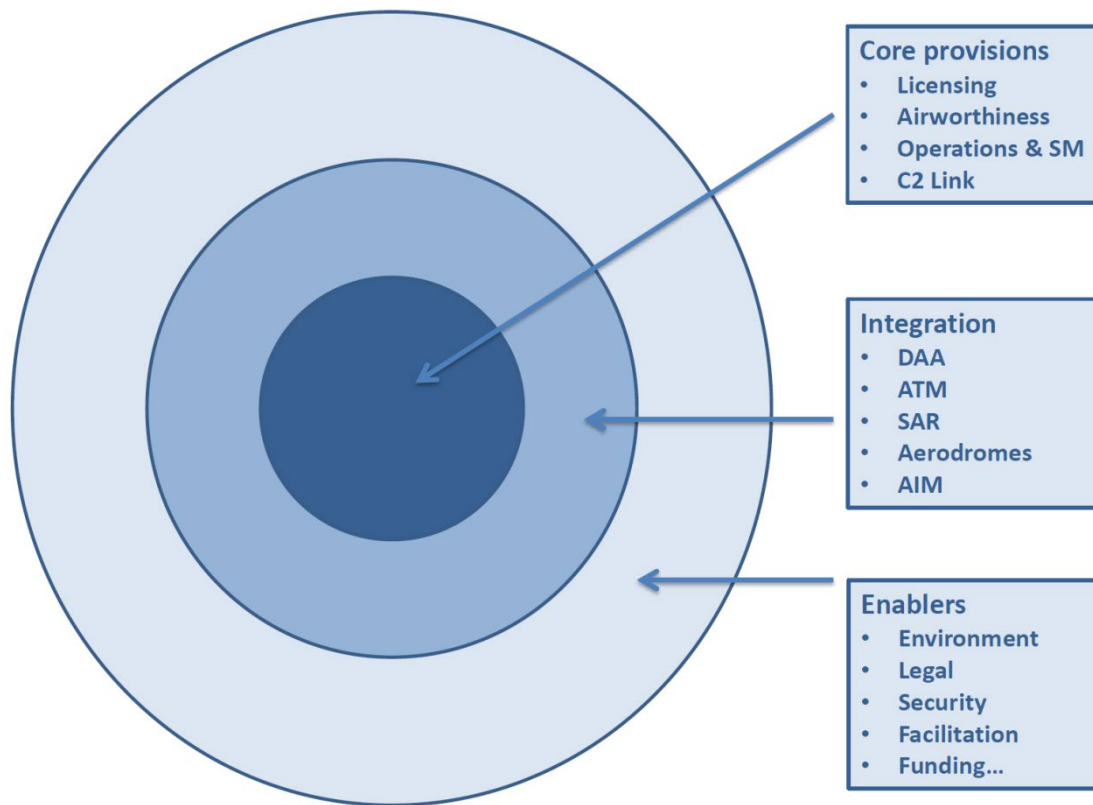
	2020	2021	2022	2023	2024	2025	2026
Licensing			Applicable				
Airworthiness		Effective					Applicable
C2 Link (gen.)		Effective					Applicable
Operations					Effective		Applicable
Safety management					Effective		Applicable
C2 Link (techn.)						Effective	Applicable
DAA						Effective	Applicable
ATM						Effective	Applicable
Other prov.	Meteorology, Charts, Facilitation, Accident investigation, Aerodromes, AIM, Environment, Security, Dangerous Goods...						



# Deliverables of RPAS Panel

Area	Provision	Reference
RPAS	Annex 2, App. 4	Annex 2, App. 4
Registration	Annex 7	Annex 7 (2.2 & 2.3)
Accident investigation	Annex 13	Annex 13 (Def. & 5.1.2 note 3)
Licensing	Annex 1 (Amdt. 175)	AN 12/1.1.23-18/11
Airworthiness	Annex 8, Parts I, VIII, IX and X	AN 3/5.12-21/20
C2 Link	Annex 10, Vol. V and VI	AN 7/66.2.2-21/17 & AN 7/67.2-21/18
Operations	Annex 6, Part IV	In progress
Detect and avoid	Annex 10, Vol. IV, Part 2	In progress

# Other ICAO work



- **Core provisions for international air navigation**
- **Additional requisites for safe international navigation**
- **Other ICAO work to integrate RPAS into int'l aviation**



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# ICAO resources

<https://www.icao.int/safety/ua>



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Headquarters  
Montréal

Western and  
Central African  
(WACAF) Office  
Dakar

European and  
North Atlantic  
(EUR/NAT) Office  
Paris

Middle East  
(MID) Office  
Cairo

Eastern and  
Southern African  
(ESAF) Office  
Nairobi

Asia and Pacific  
(APAC) Sub-office  
Beijing

Asia and Pacific  
(APAC) Office  
Bangkok



THANK YOU