ICAO UAS RELATED ACTIVITIES

Update on ICAO UAS Advisory Group

28 September 2021

Introduction

- ICAO UTM Framework Update

- DRONE ENABLE 2021 Outcomes

- Advance Air Mobility Strategy
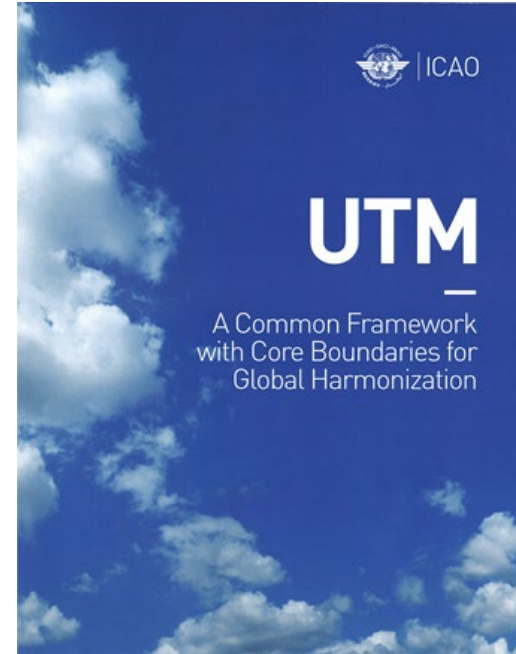
- DRONE ENABLE 2022

- ICAO UAS Model Regulations

UTM Framework – Overview

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

ICAO

UTM
_

A Common Framework
with Core Boundaries for
Global Harmonization

UTM Framework – Objectives

- 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

UTM Framework

EDITION 1 (RELEASED)
- Registration, identification and 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 (DRAFTING)
- UA performance requirements in a UTM environment
- UTM system certification requirements
- UTM in aerodrome environments/activities

ICAO   SAFETY

- *Facilitating Future Innovation*

- Panels
  - o Key Stakeholder
  - o UTM Lessons Learned
  - o Advanced Air Mobility

- RFI Sessions
  - o Results

- Roundtables

- All sessions are available for viewing

- Activities
  - UTM Framework Edition 4
  - DRONE ENABLE 2022 Problem Statements
  - Draft DRONE ENABLE 2022 RFI
  - RFI Submission Reviews
- Development of a UTM Toolkit
- Recommendations on Phase 3 activities

- To include:
  - Vision statement
  - Work that needs to be completed
  - Who is best to complete the work
  - Recommendations on a way forward
- Included strategy in the ICAO Global Air Navigation Plan (GANP)

- DRONE ENABLE 2022 (8–10 November 2022)
  - Request for Information Sessions and Topic Specific Panels
  - Request for Information
    - Release date – early January 2022
    - Submissions due – mid April 2022

- RPAS Symposium 2022 (15-17 November 2022)
  - Topic Specific Panels
  - Updates on ICAO regulatory development activities

Details will be available shortly on the ICAO Event Website

UAS – ICAO Model UAS Regulations

ICAO UAS Model Regulations

➢ Development and background

Sept. 2016

Oct. 2018

Sept. 2019

39th Session of ICAO Assembly

➢ Leadership role to develop guidance for harmonized UAS regulations;
➢ Receive industry studies on cyber-resiliency;
➢ Develop UAS awareness and educational campaigns for users.

13th Air Navigation Conference

➢ Formulate & implement technical and regulatory solutions for UAS;
➢ Insure UTM systems interoperable with ATM systems;
➢ Enable authorization of non-certificated UAS in high-seas airspace.

40th Session of ICAO Assembly

➢ Accelerate full regulatory framework for UAS and UTM;
➢ Develop provisions and guidance material for safety risks of unauthorized presence of UA near aerodromes.

ICAO UAS Model Regulations

- ICAO's UAS mandate:
  - Harmonization of regulations
  - Safe and coordinated integration of UAS activities
 - Assistance to ICAO Member States

ICAO UAS Model Regulations

Establish scope of unmanned aviation
- Categorization:
  - Open category: Part 101
  - Specific category: Part 102
  - Certified category: ICAO Annexes
- Approved Aviation Organizations (AAO): Part 149
- Advisory Circulars (acceptable means of compliance):
  - AC 101-1
  - AC 102-1
  - AC 102-37: Dangerous Goods
- Guidance Materials:
  - U-AID
  - UTM
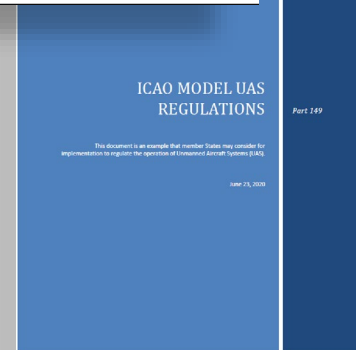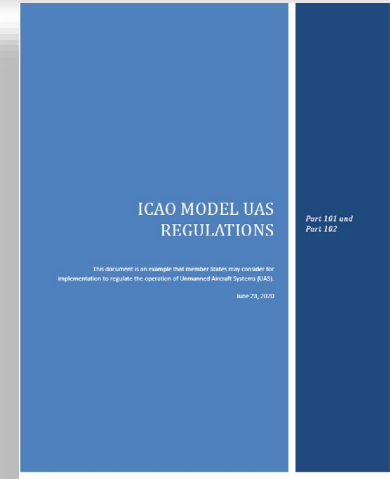
ICAO UAS Model Regulations

- Establish scope of unmanned aviation
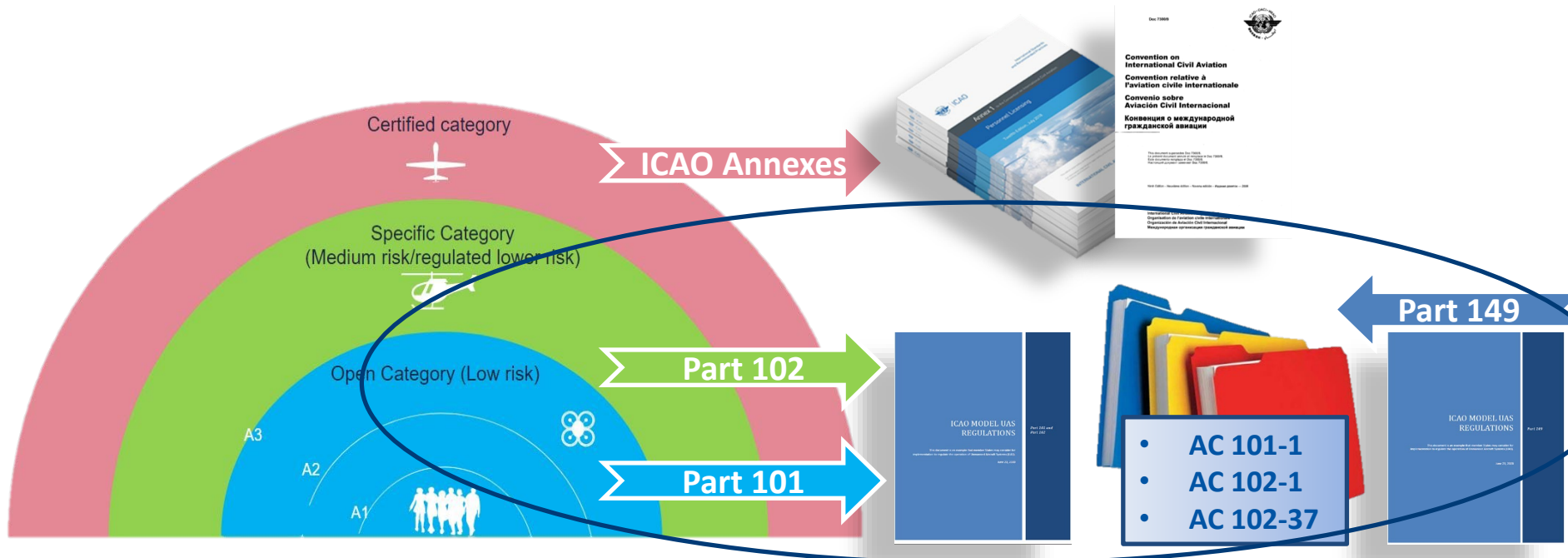
How to use

- Living documents evolving with UAS technologies;

- Flexibility:

    o Use in the current form, or;

    o Supplement existing national UAS regulations.

- Prescriptive and Performance-based regulations;

- Operation-centric risk-based approach.

Elements <u>NOT</u> addressed in the UAS Model Regulations

- States will need to address the following to insure alignment with existing national policy/law:

  o Privacy, insurance, economic authority;

  o Environmental requirements (noise and emissions);

  o Law Enforcement requirements and/or guidance;

  o Cyber Security Issues.

www.icao.int/safety/UA

Model UAS Regulations

Humanitarian Aid & Emergency Response Guidance

UTM Guidance Edition 3

UAS Toolkit

Questions/Discussion