DGP-WG/2017-IP/6
4/5/17

DANGEROUS GOODS PANEL (DGP)
WORKING GROUP MEETING (DGP-WG/17)

Montreal, 24 to 28 April 2017

Agenda Item 6: Other business

PRESENTATION ON BRIEFING FOR DG PANEL ON REMOTELY PILOTED AIRCRAFT SYSTEMS (RPAS) & UNMANNED AIRCRAFT SYSTEMS (UAS)

(Presented by the Secretary of the Remotely Piloted Aircraft Systems Panel (RPASP))

(16 pages)
DGPWG.2017.IP.006.6.en.docx

ICAO SAFETY

Briefing for DG Panel on

Remotely Piloted Aircraft Systems (RPAS) & Unmanned Aircraft Systems (UAS)

Leslie Cary

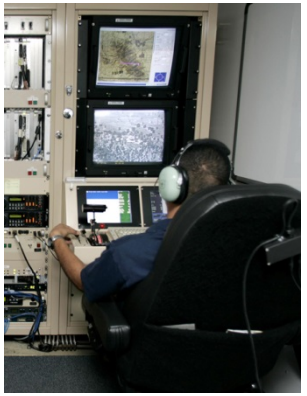
Programme Manager - RPAS

4 May 2017

UA versus RPA

Unmanned aircraft include:

- Free balloons
- Model aircraft
- Remotely piloted aircraft
  - airspace/aerodrome integration requires control
  - control, in real time, provided by a licensed remote pilot
  - certificated aircraft / system

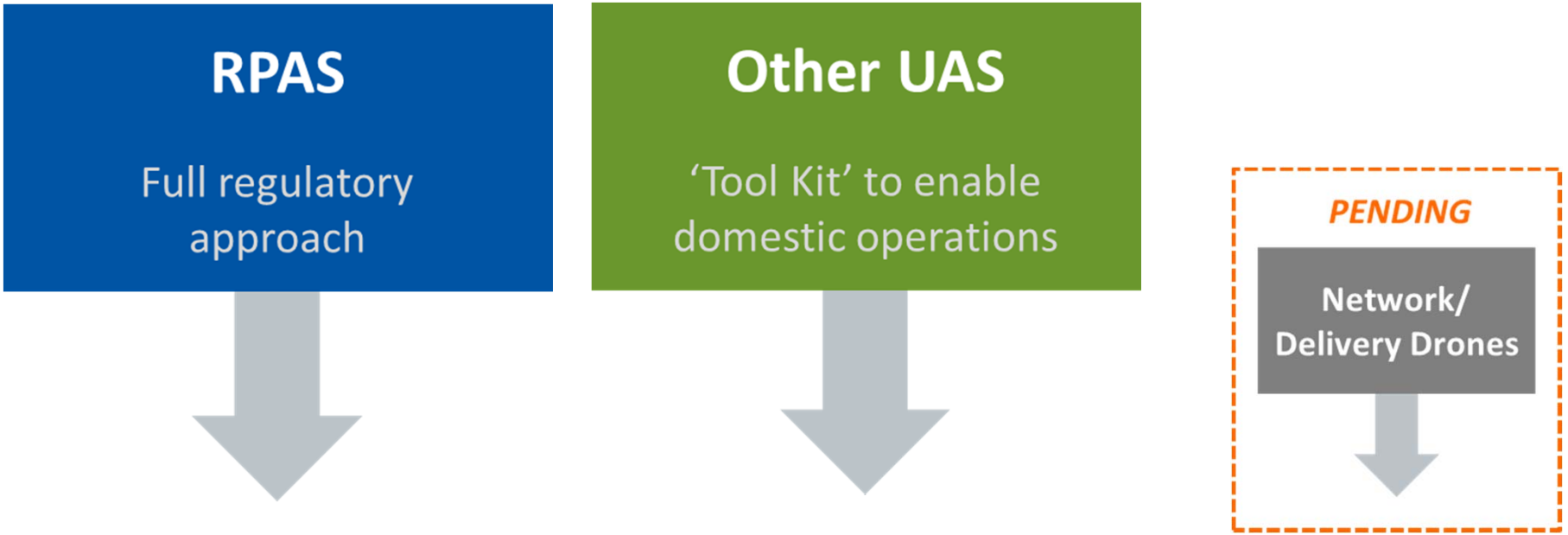


- Drones

The Drone Market Environment 2016

© 2015 all rights reserved | DRONE INDUSTRY INSIGHTS | Hamburg, Germany | www.droneii.com

Two Approaches / Two Streams of Work

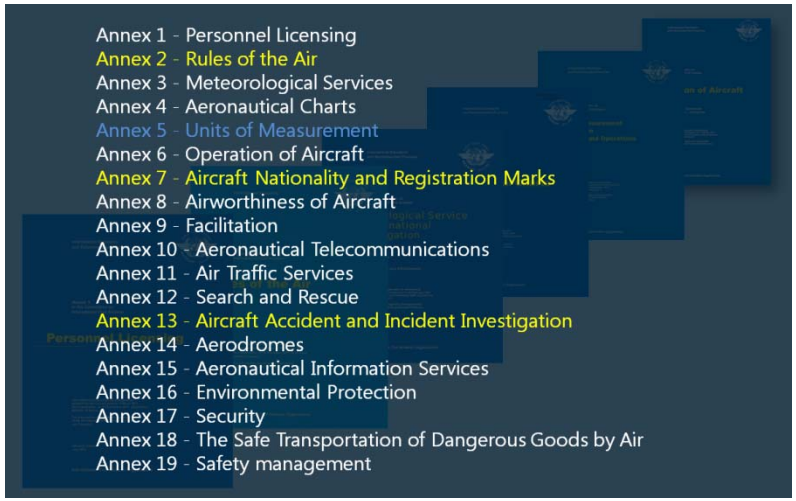


ICAO Focus

- International IFR operations
- Global interoperability
  - Priority is fundamentals to initiate international operations
    - » Certificate of airworthiness
    - » RPAS operator certificate
    - » Remote pilot licence
- National Authority Focus: Domestic operations, which may differ significantly from int'l ops

RPAS Workstream

- **Objective**
- RPA operate alongside manned aircraft, as a predictable, cooperative airspace user:
  - 18 of 19 Annexes affected



RPAS Workstream

- **RPAS Panel**
  - Developing the regulatory framework for RPAS to conduct IFR operations in controlled non-segregated airspace/aerodromes

- **Other ANB Panels supporting on technical matters**

FSMP (Spectrum)	**FLTOPSP FLIREC-WG** (OPS and Flight Recorders)	**AIGP** (Accident Investigation)	**ATMOPSP** (ATM Operations)	**AIRP** (Airworthiness)	**CP** (Communications)	**SP** (Surveillance)	**SASP** (Separation)	**SMP** (Safety Management)

RPAS Panel Organization

- Panel Leadership
  - Panel Chairman: Mike Gadd
  - Panel Vice-chairman: Randy Willis
  - RPAS Program Manager: Leslie Cary

- Working Groups and Rapporteurs
  - WG 1 – Airworthiness
  - WG 2 – C2 Link
  - WG 3 – Detect and Avoid
  - WG 4 – Remote Pilot Licence
  - WG 5 – RPAS Operations
  - WG 6 – ATM Integration
  - WG 7 – Human performance
  - RPASP/SMP Task Force

RPAS: Other work within ICAO

- Legal Committee
- Committee on Aviation Environmental Protection (CAEP)
- Aviation Security Panel (AVSECP)

DG and RPA in ANB Business Plan

ICAO Business Plan

ANB - Air Navigation Bureau

1 - Safety

SAF-P2 - Flight and Ground Safety

Department	#	Project / Key Activity	Responsible	Deliverable			
				#	Title	End Date	Responsible
				2.3.w369	*Doc 9284 - Tech Ins for the ST of DG by Air (Doc 9284) / Instructions on how to handle dangerous goods carried on RPA*	*2020-11-30*	

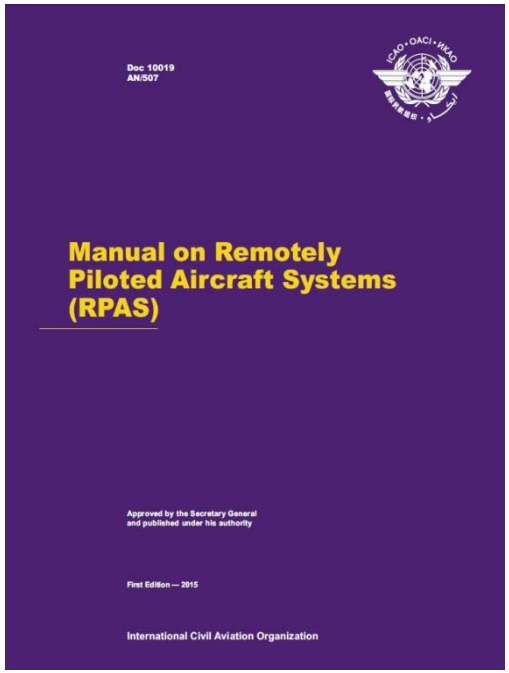
Challenges on RPA

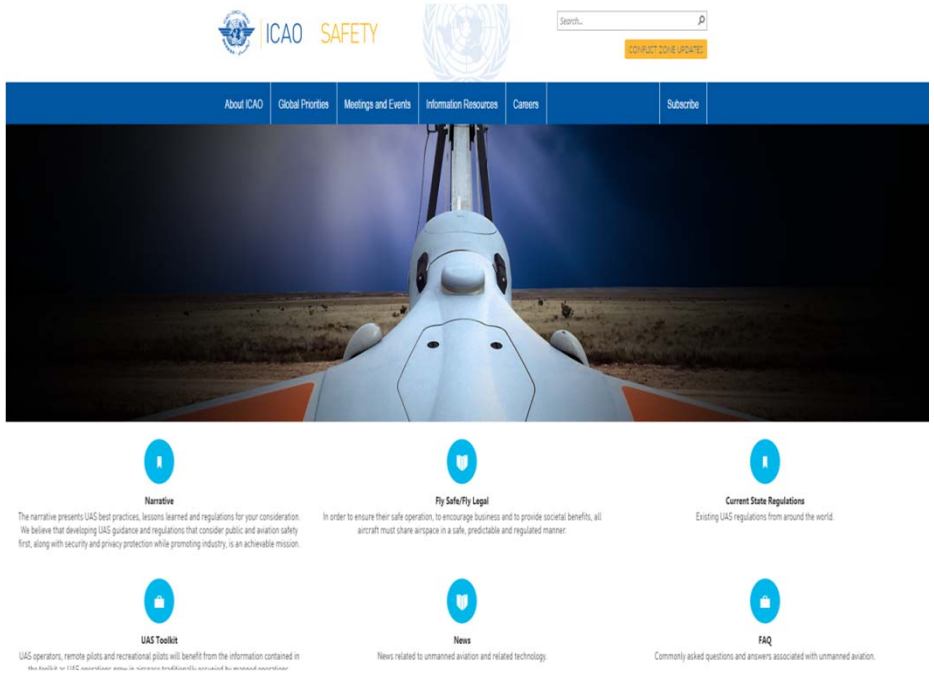
- Areas of operations and airworthiness:
  - Packaging requirements and RPA design limitation
    - ‘unmanned only’ packaging?
    - lighter requirements on RPA?
    - different DG limits for RPA?
  - Adaptation of DG tech instructions to RPAS characteristics
  - Operational procedures
    - notification to remote pilot
    - hazard detection and mitigation of consequences

Expected outcomes

- Request: DG Panel to provide input to RPASP to be included in draft proposals for:
  - Annex 6, Part IV
  - Annex 8
- Additional information to be included in next amendment of RPAS Manual and UAS toolkit

Guidance material and resources





ICAO

THANK YOU