ICAO – RPAS 2015
Workshop 4 – Civil/Military RPAS Integration

UK Civil/Military RPAS Integration

24 March 15
Sqn Ldr Nichola Rennet
Scope

- UK Military RPAS – Background
- MAA Regulation of RPAS
- Transitioning to UK Peacetime Ops
  - Military Challenges
  - Current Activity and Future Targets
- The Conundrum Cycle
- Barriers
UK Military RPAS – Background

• Afghanistan
  • Several RPAS types procured as Urgent Operational Requirements (UOR)
  • End of Operations Nov 14
  • RPAS operated in the UK
    • Limited - Release to Service / Certification challenges
  • Increased awareness/experience of operating RPAS – greater demand
MAA Regulation of RPAS Review

- MAA review of RPAS regulations
  - Recognition of exponential growth in proliferation of RPAS
  - Requirement for proportionate regulation
  - Weakness of legacy regulations to address RPAS-specific issues
  - Sep 13: Formation of MAA multi-disciplinary team - extensive, key stakeholder consultation
  - Jan 15: Formal introduction of bespoke RPAS Regulatory Framework
MAA Regulation of RPAS Categorisation

- 6 classes
- Risk to life approach to regulation
  - MTOW starting point
  - Intended use and operation (aggravating & mitigating factors)
- Sliding scale regulatory regime
<table>
<thead>
<tr>
<th>Class</th>
<th>Mitigating Factors</th>
<th>Aggravating Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>I(a)</td>
<td>Operate with due regard</td>
<td>Class II &amp; III</td>
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<tr>
<td>I(b)</td>
<td>Air System Safety Case</td>
<td>MALE / HALE / Strike / Combat</td>
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<tr>
<td>I(c)</td>
<td>Air System Safety Case + Controls</td>
<td>“Full” Regulatory Assurance - Certification - Design and Continuing Airworthiness</td>
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<tr>
<td>I(d)</td>
<td>Tailored Certification with appropriate DAw and CAw</td>
<td>“Neutral Risk Point”</td>
</tr>
</tbody>
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- Universal requirement for DHCP, SO, CAE, TAA
Transitioning to UK Peacetime Ops
Military Challenges

- MAA has set the regulatory conditions and prepared the ground for future of military RPAS in UK
  - Caveat - subordinate to the CAA
- RTS/Certification challenges
  - Reaper MQ-9
- Scan Eagle, Watchkeeper, Desert Hawk III
- Airspace – segregated only
- Defining the peacetime role
Transitioning to UK Peacetime Ops
Current Activity and Future Targets

• Working with CAA and Industry to set the conditions for RPAS in civilian airspace
• Project CLAIRE
  • Thales UK – SESAR sponsored project
  • Military registered Watchkeeper RPAS
  • Capability establishment and demonstration of RPAS/ATM procedures in UK CAS
  • Pathfinder project to set conditions for future activity and investment
• Military representation within Europe and UK Cross-Government Working Groups
• Dec 2018: BVLOS RPAS in unsegregated UK airspace - Scavenger
• Break the Conundrum Cycle
The Conundrum Cycle

Technical Development

Risk

User Requirements

Reward

Legislative/Regulation Changes

Regulation

Need to break the loop!!

ASTRAEA

Thales DAA

MoD

Civil Sector

OGDs

CAA

CLAIRE

MAA

Military Aviation Authority
Barriers*

Technical Development
- Technological barriers
- Conspicuity
- Collision avoidance
- Comms infrastructure

Legislative/Regulation Changes
- Regulatory review
- Regulatory requirements
- Ac/software certification

User Requirements
- Identify requirement for RPAS operations
- Capability

*According to Nic
Questions

MAA website: www.gov.uk/government/organisations/military-aviation-authority

RPAS Regulations: Regulatory Article (RA)1600