RPAS/UAS Integration Considerations into Non-Segregated Airspace

Presented to: ICAO 2nd Global RPAS Symposium

Presented by: Randy Willis, Manager,
FAA Emerging Technologies Office

Date: September, 21, 2017

Agenda

- Policy Considerations

- Airspace Considerations

- ATM Infrastructure Considerations

- Training Considerations

- Moving forward

Policy Considerations

- Policy maturation takes time
  - Typically incremental
  - Often through lessons learned
- Feedback from operators is crucial
  - Operational data collection
  - Incident/accident data
- Collaboration within organization
  - Harmonized and complimentary
- Safety Management
  - Identifying Risks and mitigations

Airspace Considerations

- Current operational challenges
  - Mission driven flights (aerial photo, fire/rescue)
- Existing airspace structure vs desired UAS operations
  - Package delivery
  - ATM vs UTM airspace environment
- Airspace regulatory change
  - Needed? Or can existing structure support?
- Separation standards
  - Small UAS integration will drive different thoughts

ATC Automation Considerations

- Automation/UAS Procedure Development
  - En Route Automation Modernization (ERAM)
  - Modifications to recognize unique operating characteristics (Conflict probe, vertical/spiral take-off)
  - ATM Software
    - Beacon code allocation for UAS lost link (Code 7400)
  - UAS Contingency Procedure Development
    - Standardizing UAS Lost Link
      - FAA Working Group
      - ICAO RPAS Panel

Training Considerations

- RPAS Terminology
  - Lost Link
  - Remote Pilot Station
  - Visual line of sight
- RPAS Performance Characteristics
  - Tremendous variability
  - Operational performance capabilities
- Contingency planning
  - Lost link (air and ground)
  - Not ad hoc, but preplanned

Moving Forward

- How best to support a very fast moving industry?
  - Nimble policy development that safely supports growth
  - Conduct appropriate research and development
  - Collaboration with all stakeholders
- Maturation of technology
  - Enabling RPAS to safely integrate with few impediments
  - Innovation will drive new capability

THANK YOU!