



# AFOTEC

AIR FORCE OPERATIONAL TEST AND EVALUATION CENTER





# Test and Evaluation of Autonomous Systems

## *Air Force UAV Operational Test*

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# Purpose



- Present AFOTEC's role in operational test of unmanned aerial vehicles





# Overview



- **AFOTEC Involvement**
- **Evolving Process**
- **Lessons Learned**
- **Future Challenges**





# AFOTEC Involvement



- **AFOTEC first involved when RQ-1 was still an ACTD ('94)**
  - **Characterization data from prior exercises/deployments**
  - **Bosnia deployments: July '95 (no AFOTEC), March '96 (w/AFOTEC)**
  - **ACTD has no formal “user requirements” – AFOTEC adapted**
  - **AFOTEC issued first RQ-1 report, Nov '95**

- **Evolution necessary**
  - **Additional ACTD's already on horizon**



# Evolving Process



- Oct '97, DARPA asks AFOTEC to evaluate Global Hawk
- AFOTEC prepared to add value



- Early Influence mindset evolved
- Rapidly met warfighter needs



# Lessons Learned



- **Agility and flexibility**
  - Adapt tests if conducted in combat
- **Test...then deploy**
  - RQ-4 deployed during DT
  - Test vs mission mindset
- **Surrogate platforms**
  - Proteus for RQ-4
  - Saves time and money
- **Early influence**
  - Help refine requirements
  - Maximize DT/OT interface
- **Rapid fielding**
  - Capability to warfighter





# Future Challenges



- **National airspace restrictions**
  - Training limit = Testing limit
  - Affects all UAVs
- **Dedicated test assets**
  - Communicate need early
  - CV-22 success
- **Net-centric solutions**
  - Architecture important as vehicle
  - Information assurance
  - Interoperability
  - Improve security







# Summary Slide



- **Constant communication and coordination are important for AFOTEC to stay a step ahead**
  - Refine requirements
  - Coordinate DT and OT
- **There will be more ACTD's in the future**



***Rapid fielding of effective systems to allow warfighter to kill faster with less risk to our Airmen, Joint partners, and Allies***