

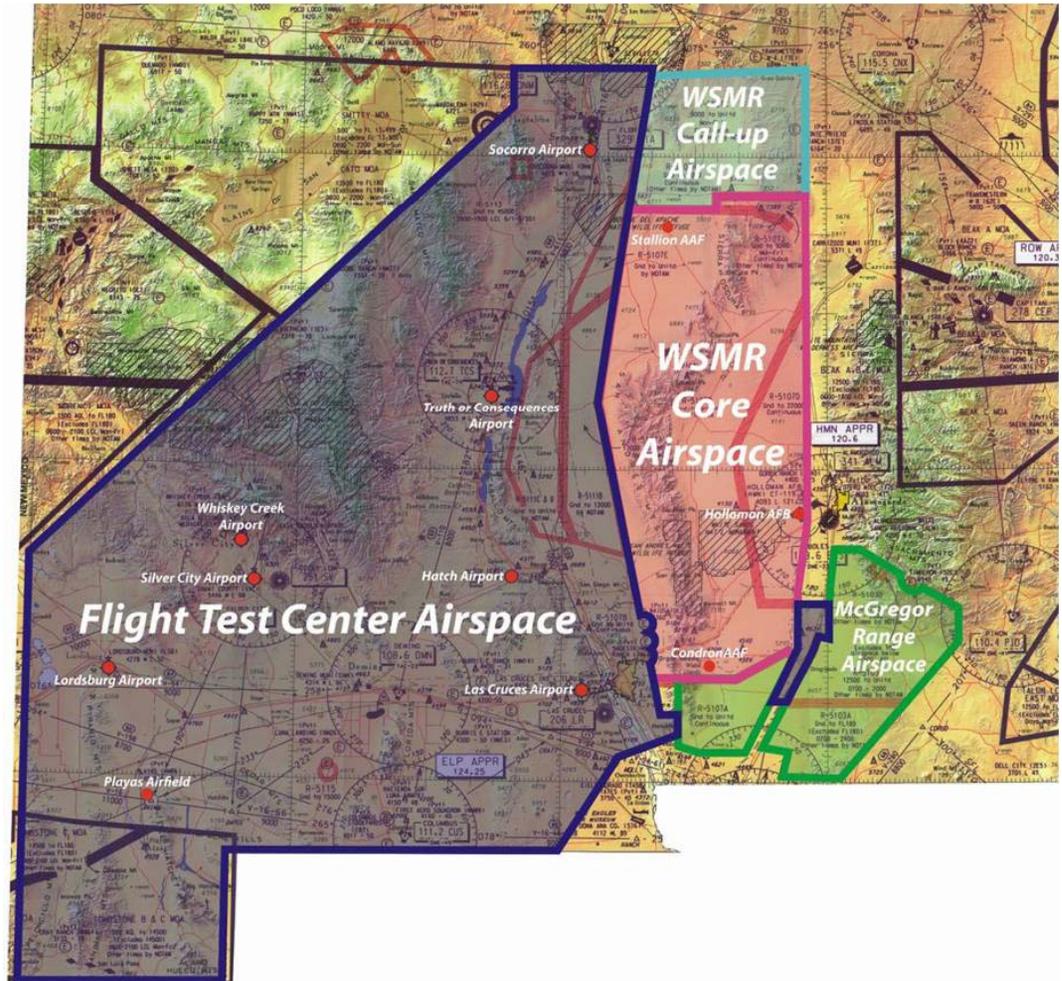
Operating a Flight Test Center in the NAS

Presenter: Dennis Zaklan



Southwest New Mexico Airspace

- Over 15,000 square miles of available airspace
- Excellent year-round flying conditions
- Uncongested airspace
- Highly varied terrain
- Available Special Use Airspace from “surface to space”



NMSU/TAAC

UAS One-Stop Shop for

- UAS Operations
- Flights in Civil Airspace
 - Airspace
 - Personnel
 - Relationships
 - Operational Record
 - Facilities
- Certification and Regulatory Research and Validation
- Platform and Subsystem Demonstrations



UAS Flight Test Center (FTC)

- FTC relevant to all classes of UAS
- FAA-approved process
 - Assess system capabilities
 - Identify and mitigate risks
 - Establish operating limits tailored to UAS capabilities
- Collect and archive data for the FAA
 - System and component information
 - Flight performance
 - Will lead to development of UAS standards and regulations



Who Can Fly

Public & Civil UAS

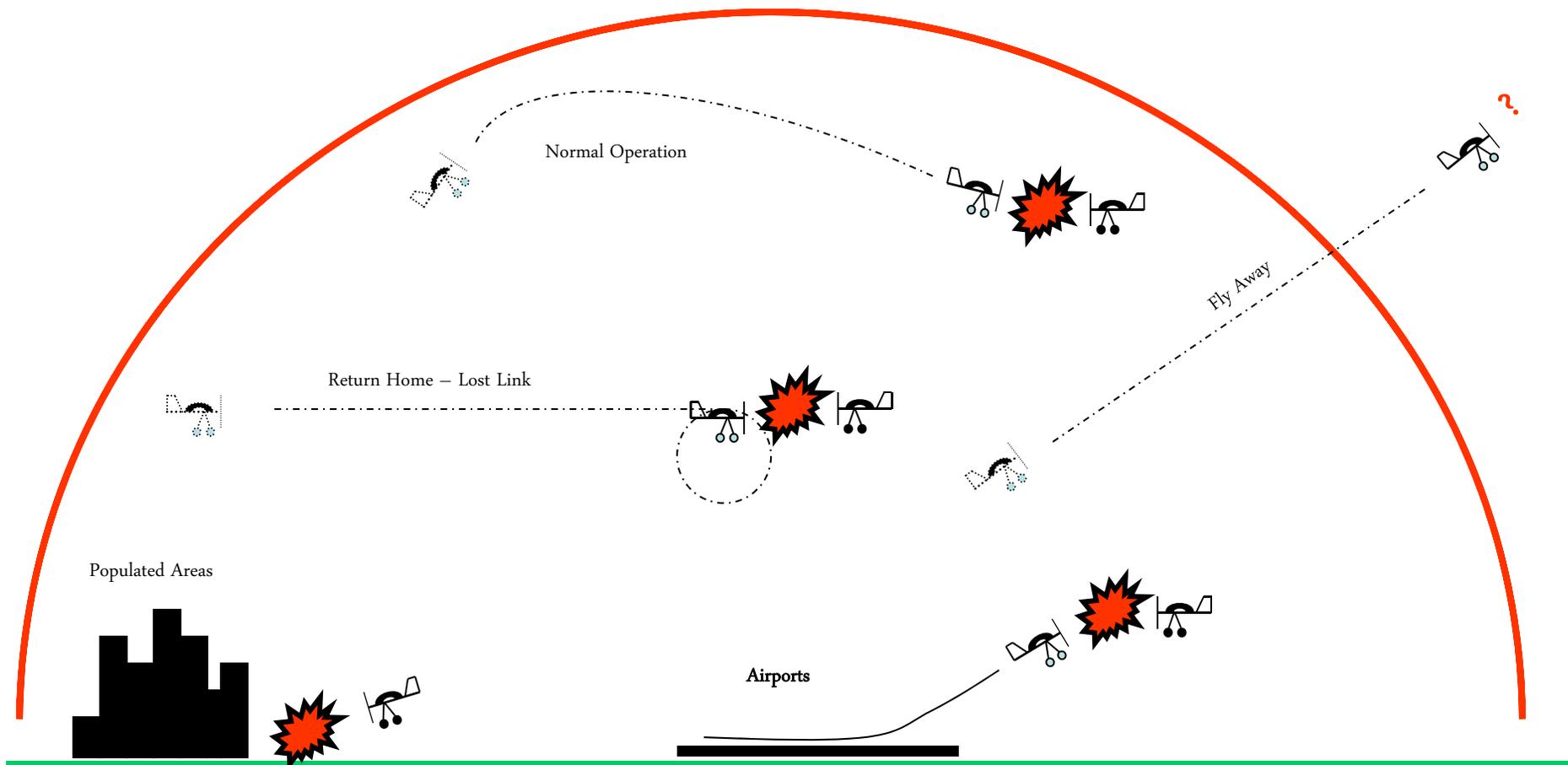
- Government –
DOD -DOJ -DHS –ARS- DOI- Police etc
- Manufacturers
- Private persons
- Commercial Operators

Expertise/Experience

- 12 years operating UAS in the NAS (non-segregated airspace)
- Special-use airspace experts (NAS High Altitude Ballooning Program)
- UAS experience
 - Three current COAs
 - Assisted DoD with initial domestic and overseas Global Hawk flights; Altair in 2004 from SOCAL to AK and return for Coast Guard demonstration
- Three classes of UAS (tactical, medium, and small) that are used for RDT&E
- International Airspace Coordination

NMSU UAS Pictures



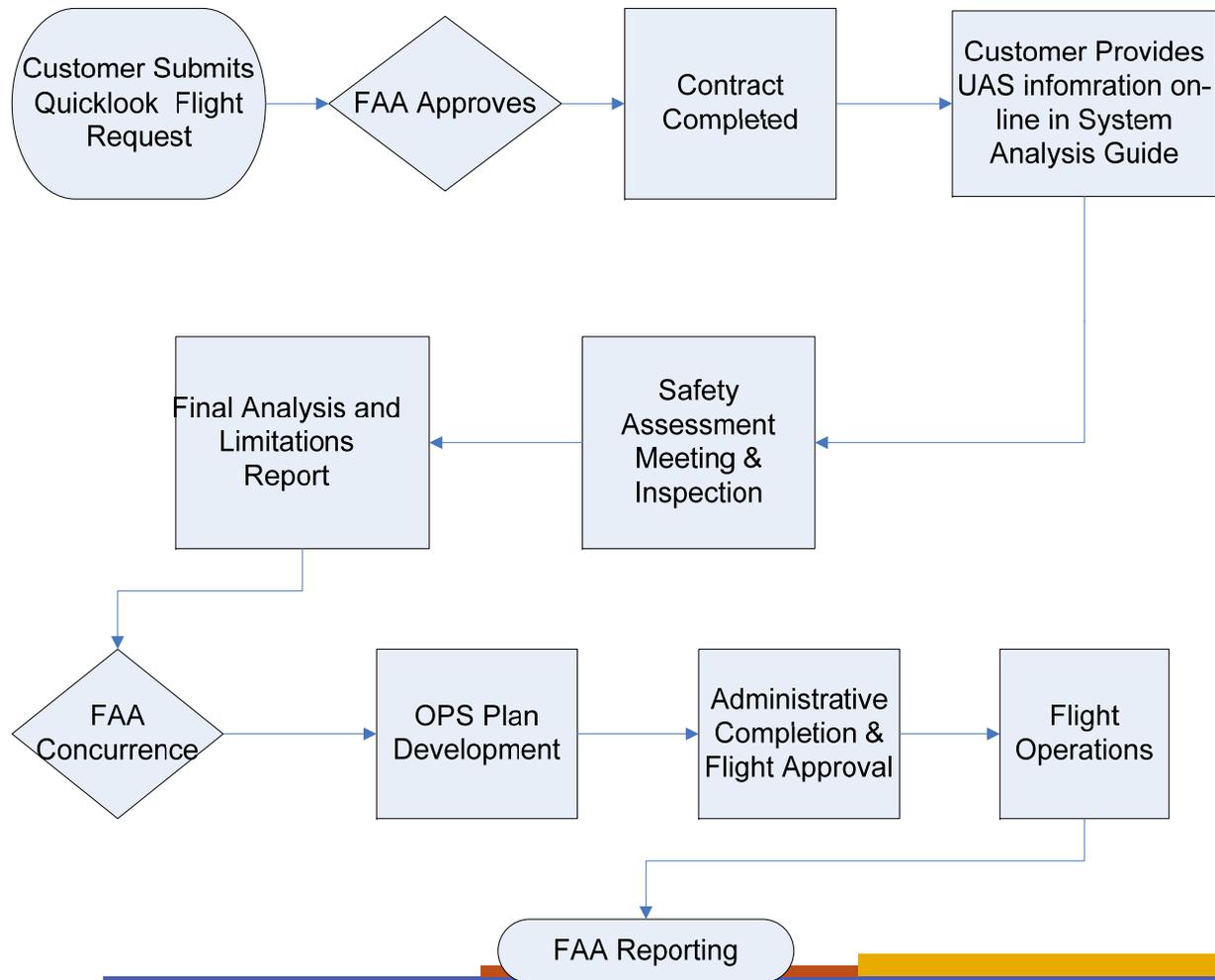


Applicant Provides:

- Description of Operational Area
- Description of UA Operations
- Description of System Performance

Applicant's Requested Operational Area

UAS FTC Process Basic



FTC Benefits

- **Flexibility to execute wide range of UAS RDT&E operations**
 - 15,000 square miles of airspace
 - Access to numerous public airports and private airfields
 - More than one UAS flying (5 mile separation)
- **Time from initial inquiry to first flight can occur in matter of weeks depending on complexity of the system**
- **“File and fly” within COA airspace once initial operating limits established**

UAS Flight Operations

- **Coordinate with**
 - FAA - HQ, Region, ARTCC**
 - DOD Area Freq Coordinator & FCC**
- **Restrictions – General & Platform Specific**
 - UAS FTC Imposed**
 - FAA Imposed**
- **Advantages**
 - Scheduling**
 - Terrain – Mountains, Desert, Forest, even Water**
- **More than one UAS as long as separation requirements met**

Flight Testing, Training & Demonstrations

- DHS DOI & DOD
 - AAI Shadow
 - LEA Demo
 - Sensors
 - UAS Demos
 - CONOPS Validation
 - Classified & Unclassified
- Flight testing



Las Cruces

RDT&E

WSMR

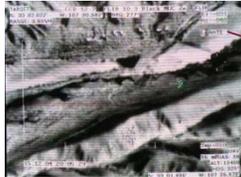
Denied GPS Environment



OSD-LEWK



DHS/Border



Combat Search & Rescue



Playas



Asymmetric Threat



IED Demo



Orbiter

FAA & 6 New UAS Test Ranges

FAA Modernization & Reform Act

- FAA to Select 6 new UAS FTR's for UAS Testing
Behind Sched: RFP July –Selection in Dec 12
- Different Regions to address climate and other Factors
- Must be in the NAS – Not Segregated Airspace
- Possibly for different UAS types/sizes/capabilities
- NMSU not one of the 6 to be selected
- NMSU “Grandfathered in (7th?)”

NMSU UAS FTC “Certified” & “Gold Standard”

TAA TEST Ranges Misconceptions

- All Ranges will be the Same
- All Ranges will be Different
- FAA will Grant Ranges with Airworthiness Authority & Determination
- FAA will Grant File & Fly Authority
- There are Billions of Dollars to be had
- FAA will meet the original timelines

Test Range Timeline Issues

- **Personal PRIVACY**

 - Election Year**

- **New Congressional Legislation**

 - One Senate – 4 House on UAS/Privacy**

 - May stop selection of UAS Test Ranges**

- **New Legislation to Provide FAA with Funds to support and more realistic guidance with monetary support.**

Summary

- UAS FTC Location – Processes – Capabilities
- Experience and purpose
- FAA Involvement
- Flight Procedures
- Congressionally Directed Test Ranges
Requirements
Timelines
Issues

**Further Discussions at
TAAC UAS Conference
3-7 December 2012
Tamaya Resort
Albuquerque, NM**

Point of Contact

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