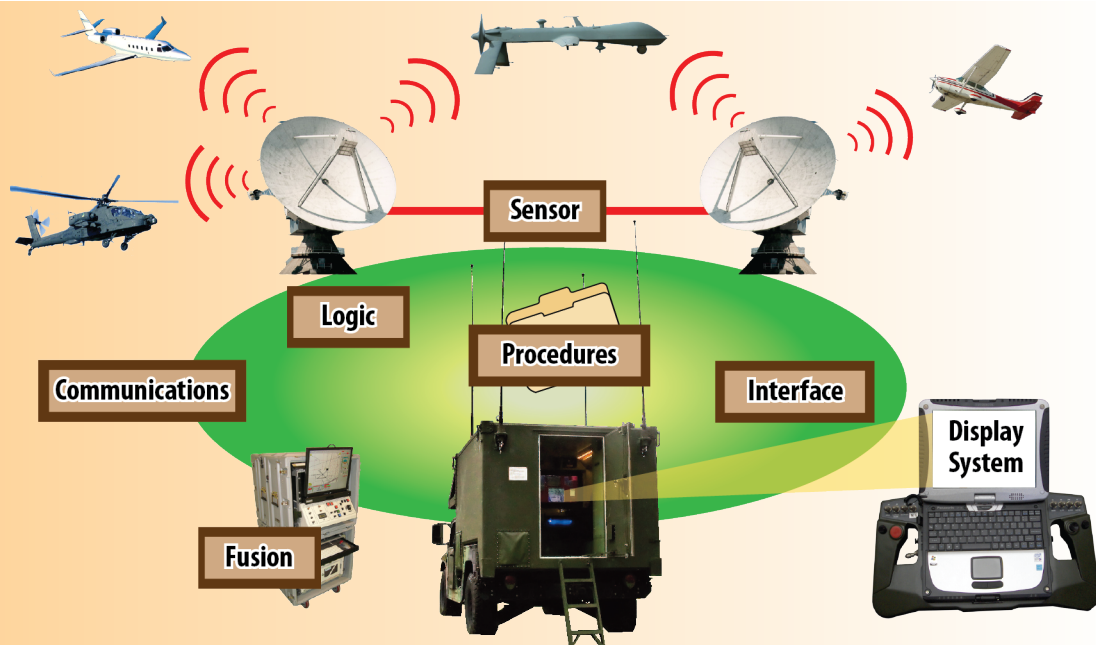


# UAS

## Unmanned Aircraft Systems



- **Immediate concern:** Develop and acquire a material solution to provide mitigations or alternate means of compliance to the Federal Aviation Administration (FAA) “See and Avoid” requirement levied in CFR Part 91.
- **Current material solution focus is Ground Based Sense And Avoid (GBSAA).**
- **GBSAA is a near term solution being developed incrementally as part of the final integrated solution with other Sense and Avoid (SAA) systems.**



# Ground Based Sense and Avoid - An Incremental Approach

## Phases of Self Separation

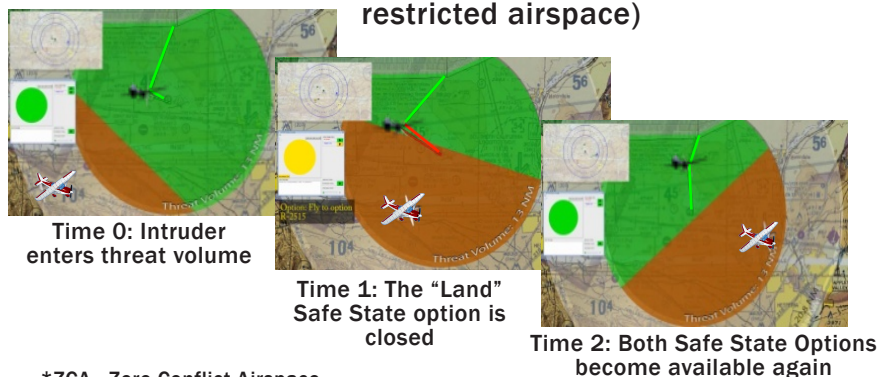
**Phase 1: Step 1** ➡ **Safe State Option Safe**  
Phase 1 - First Step (2010): Traffic Pattern/Tunnel

**Mandatory return to Safe State in case of intruder**



### Phase 1: Next Steps

In Phase 1 Next Steps: The State Option must remain open (not mandatory to immediately land or travel to restricted airspace)

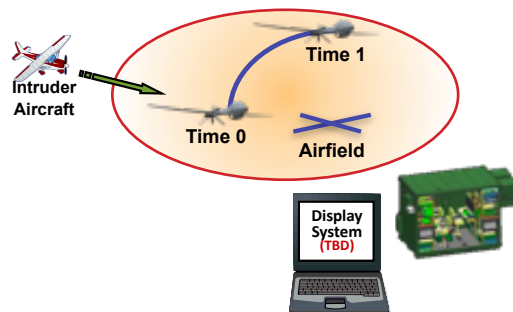


\*ZCA - Zero Conflict Airspace

**Phase 2: Maneuver with Aircraft**  
(Safe Separation)



UAS maneuvers in air to ensure safe separation (no landing or return to restricted airspace required)



### Why GBSAA?

- Enables UAS operations in the NAS without the need for chase planes and ground observers
- Enables ability to test and train
- **Near-term solution supporting the Warfighter NOW**
- Part of the final integrated solution with Airborne Sense and Avoid

### What can GBSAA do for you?

GBSAA is being developed for all services and all platforms. It is intended to be adaptable to any mission, system or location. Since it does not require changing the payload on the aircraft, size, weight and power are not an issue.

### When will GBSAA be available?

The Army Proof of Concept for GBSAA is the first Sense and Avoid system concept approved by the Federal Aviation Administration. The Army's Unmanned Systems Airspace Integration Team has begun the process to field GBSAA capability within the next couple of years.

### Does the FAA agree with this concept?

We are working in coordination with the FAA and the Army's Aviation Engineering Directorate to develop, test and qualify GBSAA requirements and standards for future systems.



DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited

**Project Manager**  
**UAS Project Office**  
(SFAE-AV-UAS)  
**Redstone Arsenal, Alabama 35898**

