

# UAS Traffic Management Beyond Visual Line Of Sight (UTM BVLOS)

## Enabling routine, safe, scalable BVLOS operations

### Challenge

- Past efforts, including the NASA UTM Project, have identified gaps that went unfilled in NASA's absence. Operationalization has stalled.
- To enable routine, safe, extensible BVLOS operations in low altitude Class G airspace through the formalization and operationalization of ground-based services.

### Expected Impacts

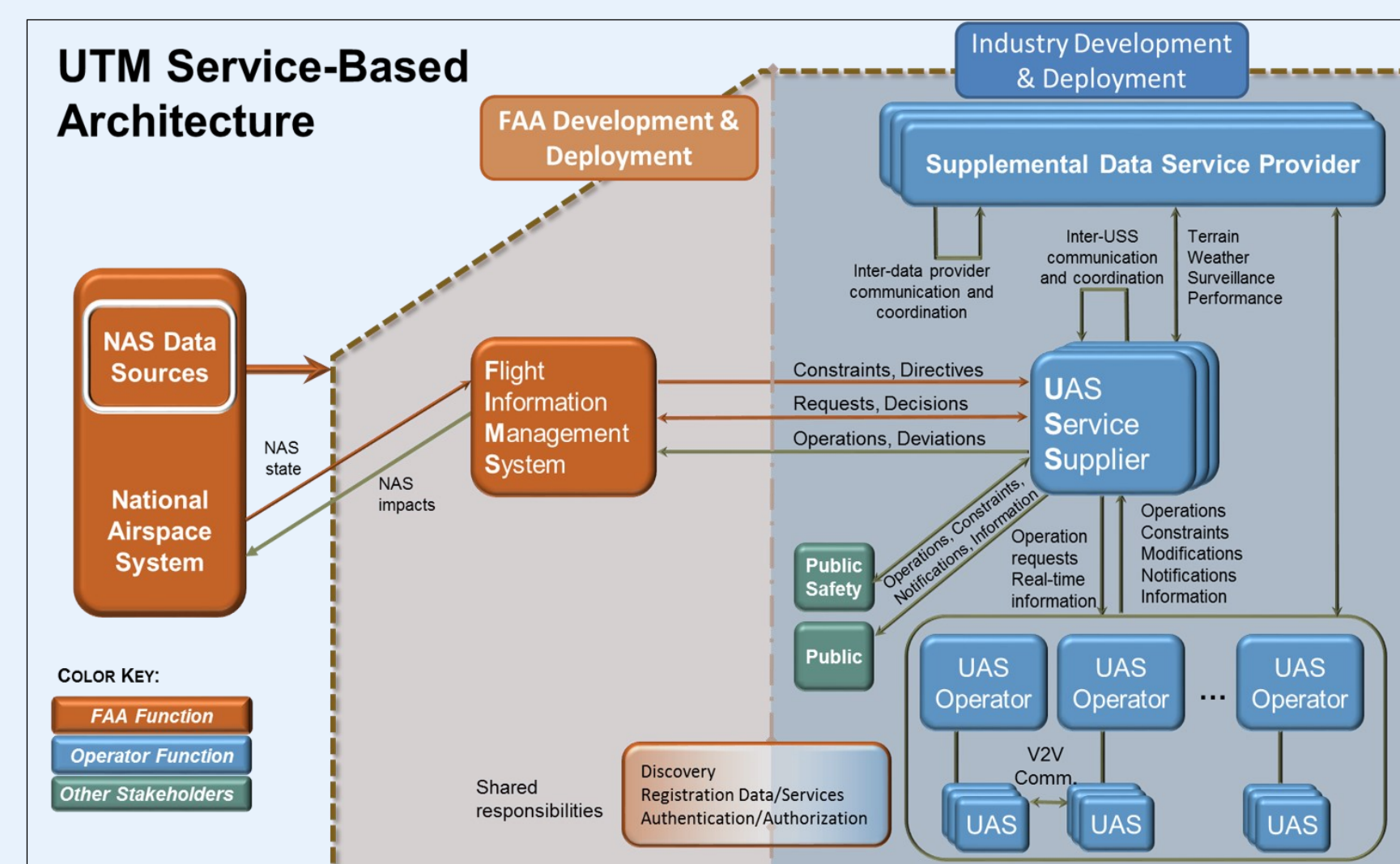
- Prior to NASA involvement, UTM concept and architecture did not exist
- UTM BVLOS will enable routine, safe, scalable BVLOS operations in low altitude Class G airspace
- UTM BVLOS research will inform:
  - FAA UAS policy and rulemaking
  - Industry UTM Standards Development
  - Future NASA xTM research, concepts, and technology development
- NASA UTM concepts and architecture has been internationally embraced

### Solution ( or Proposed Solution)

- UTM Key Site Operational Evaluation with Industry/Public operators and service providers
- Collect and evaluate operational data to inform regulatory and standards recommendations
- Work with stakeholders to stand up multiple USSs and other services to support BVLOS use cases in a live, ongoing operational environment
- Collaborate with FAA and industry to establish a test harness to verify and validate industry provided UAS Service Suppliers (USSs). NASA will take the NUSS through the FAA's Near Term Approval Process (NTAP) which will provide a path toward implementation
- Ensure wide stakeholder participation to increase acceptance and reduce risk



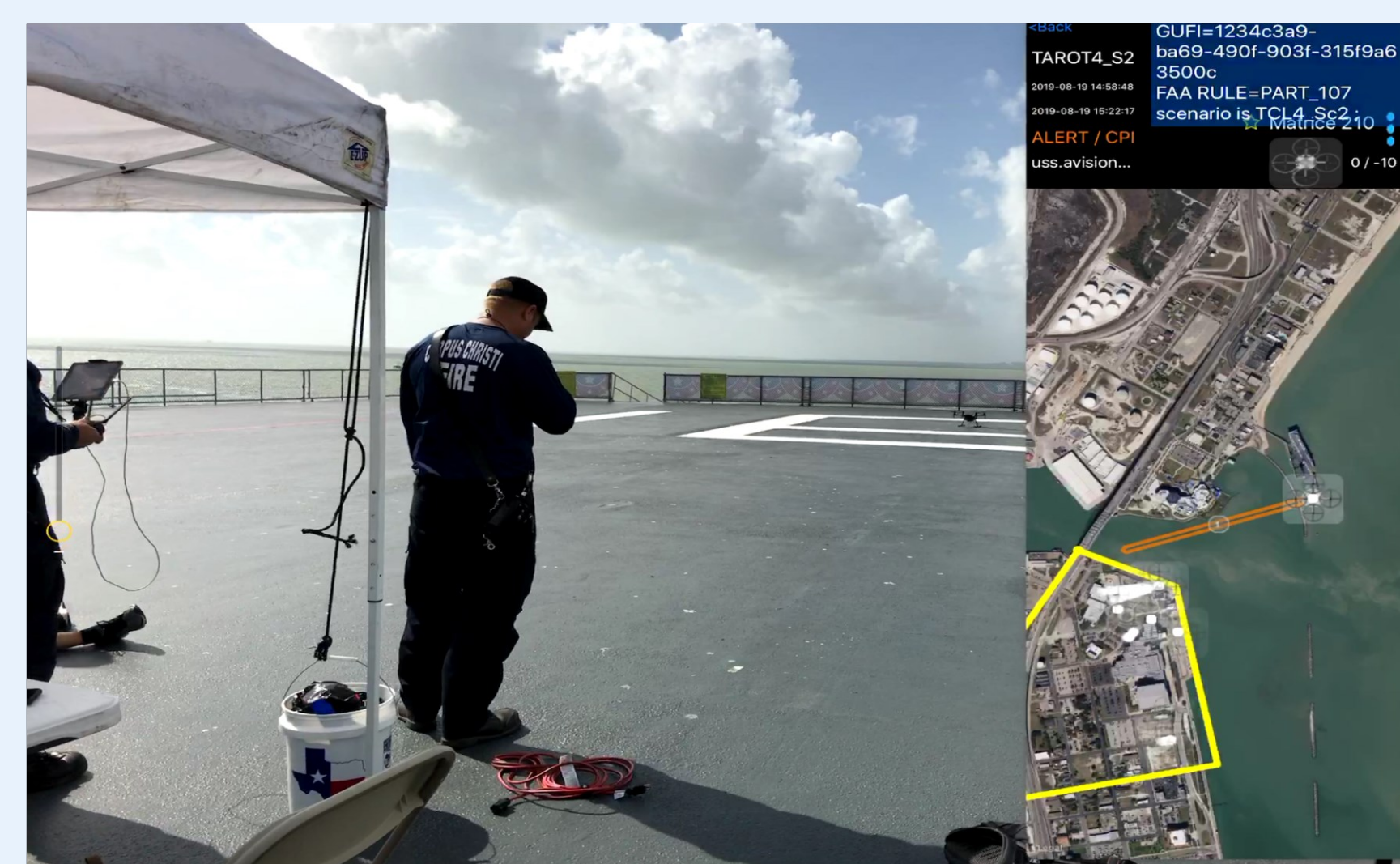
NASA is working with Industry and FAA to enable BVLOS wherever it is needed



A system architecture to support UTM in the nation's airspace was pioneered by NASA and adopted externally



NASA will be a dedicated partner with the ongoing Key Site Operational Evaluation in TX



Integration of Public Operators into the UTM environment is a focus area for the UTM BVLOS activity

### Results

- NASA is needed to help define how services can be approved and applied to enable BVLOS operations in the nation's airspace
- Working with Public Operators to integrate their operations into the same airspace as commercial entities is vital
- There is a great deal that NASA can contribute to in the development of standards in UTM that can be referenced worldwide

### Next Steps

- The initial focus on approvals for USS will expand to other UTM services
- Approval of UTM services will serve as a blueprint to be expanded to the approval of services for Urban Air Mobility (UAM) and even in the stratosphere with Upper Class E Traffic Management (ETM)

### Partners and/or Participants

- Federal Aviation Administration
- Other Government Agencies
- Industry Operators and Service Providers
- Public Operators
- Standards Development Organizations