Airspace Operations and Safety Program

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UTM High Tempo Progression and Impact

- Develop and validate airspace operations and integration requirements to enable safe, large-scale UAS operations under 400 ft. AGL, Class G airspace
- Provide prototype UTM system to FAA for further testing and development
Future of the National Airspace is Changing
Evolution of Airspace Operations and Safety

Epoch 1
Procedural. Estimate the current and planned a/c positions
Human-centered safety monitoring, assessment and mitigation

Epoch 2
Radar. Know the current and estimate planned a/c positions

Epoch 3
Trajectory. Know & exchange current and planned a/c positions
Automated in-time safety monitoring and alerting services

Epoch 4 (~2035)
Collaborative, Connected, performance-based, collaborative ATM
Introduces 3rd-party service providers
Integrated predictive risk mitigation across domains
Automatically-assured adaptive in-time safety threat management

Epoch 5 (~2045)
Highly-Automated. ML/Al - based dynamic, robust | performance and safety
Machine-to-machine interactions and humans collaborate
+ Complexity, scalability, and dynamic adaptation

Digital Transformation of ATM
Beyond NextGen

Enabling Safe, Scalable Airspace Access for Diverse Mobility Solutions

XTM
Trajectory-Based, UTM-Inspired Air Traffic Management

In-Time System-Wide Safety Assurance