ANG The Future of the NAS Starts Here

FAA Office of NextGen (ANG)

REDAC / NAS Ops

Review of FY2023 – 2026 Proposed Portfolio

Operations Concept Validation & Infrastructure Evolution

BLI Number: 1A01C

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Operations Concept Validation & Infrastructure Evolution Overview

What are the benefits to the FAA

As NAS and Enterprise concepts evolve, this program identifies operational gaps and assesses potential opportunities that could mitigate these gaps. Activities include, but not limited to:

- Analysis and risk mitigation activities for identified priority areas in support of service analysis and strategic planning
- Assessment of potential enhancements for operational suitability, and inclusion in the architecture plans for the NAS

What determines program success

Proposed NAS level concepts are linked back to validated operational needs, supporting budget planning and investment decisions.

Operations Concept Validation & Infrastructure Evolution Program Support

People:

- Program Manager: Guillermo Sotelo, AJV-S11
- Subject Matter Experts: Traffic Managers, ATC, Discipline Experts, Airspace User Community

Laboratories:

- WJHTC, MITRE/CAASD, NASA, Volpe, DAB Test Bed, NEXTOR

Current FY23 Accomplishments

- NAS Integration of Transiting Operations (NITRO) – Integration of Upper Class E and Space L/R operations into the NAS:
  - NITRO ATO Strategy and Roadmap published
- UAS Traffic Management (UTM):
  - UTM ATO Strategic Roadmap developed

Anticipated Research in FY24

Planned Research Activities

- New Entrants Operational Integration Analysis: Space Launch/Reentry Operations (LRO), Upper E Traffic Management (ETM), UAS Traffic Management (UTM), Urban Air Mobility (UAM)

Expected Research Products

- Initial set of prioritized operational requirements for Space LRO improved situational awareness
- Emerging entrants airspace access regulatory challenges
- UTM services and supporting infrastructure operational needs
- UAM airspace policies/ procedures challenges

Anticipated Research in FY25

Planned Research Activities

- New Entrants Operational Integration Analysis: Space Launch/Reentry Operations (LRO), Upper E Traffic Management (ETM), UAS Traffic Management (UTM), Urban Air Mobility (UAM)

Expected Research Products

- Space LRO – unmet operational needs for diversified operations including oceanic
- ETM – unmet operational needs for routine operations
- UTM – unmet operational needs for interoperability with ATM/ATC
- UAM – airspace and CNS unmet operational needs

Emerging FY26 Focal Areas

- Air Traffic Management and Extensible Traffic Management Concept Evolution
- Advanced Air Mobility (AAM) Use Cases (e.g., Regional Air Mobility, Cargo Low Altitude Mobility, Public Service Mobility)

Operations Concept Validation & Infrastructure Evolution

Research Requirements

- As new concepts evolve, this program identifies operational gaps and potential technologies that could address these gaps by conducting studies and analyses in operational priority areas.

Outputs/Outcomes

- Assessment and evaluation of operational requirements and the impact of the concept on system capacity, efficiency, safety, and human performance potentially leading to investment decision..

FY 2026 Planned Research

- Operational needs/shortfall for dynamic airspace use
- UCA/UCE CNS and information operational needs
- Operational needs for UTM/ATM interoperability
- Operational needs for UAM/ATM interoperability
- Operational needs for cooperative deconfliction services

Out Year Funding Requirements

	FY23 (Enacted)	FY24 (President's Budget)	FY25 (CIP)	FY26 (CIP)	FY27 (CIP)	FY28 (CIP)
F&E	$3.0 M	$3.0 M	$6.0 M	$6.0 M	$6.0 M	$6.0 M