



NASA Advanced Air Mobility (AAM) Mission

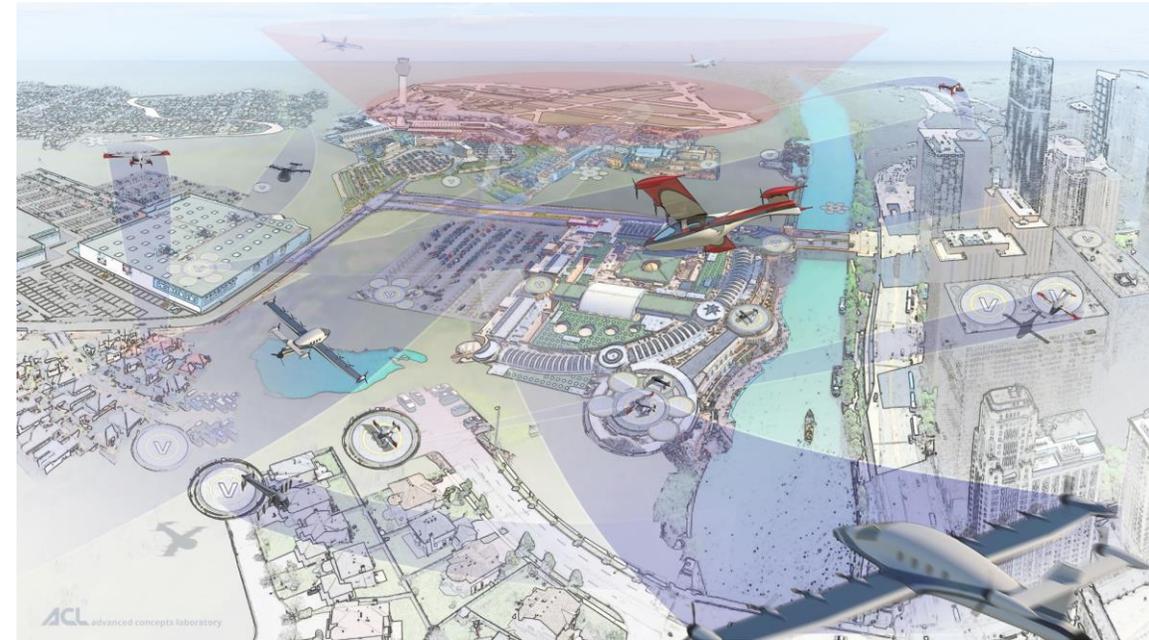
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Advanced Air Mobility (AAM)

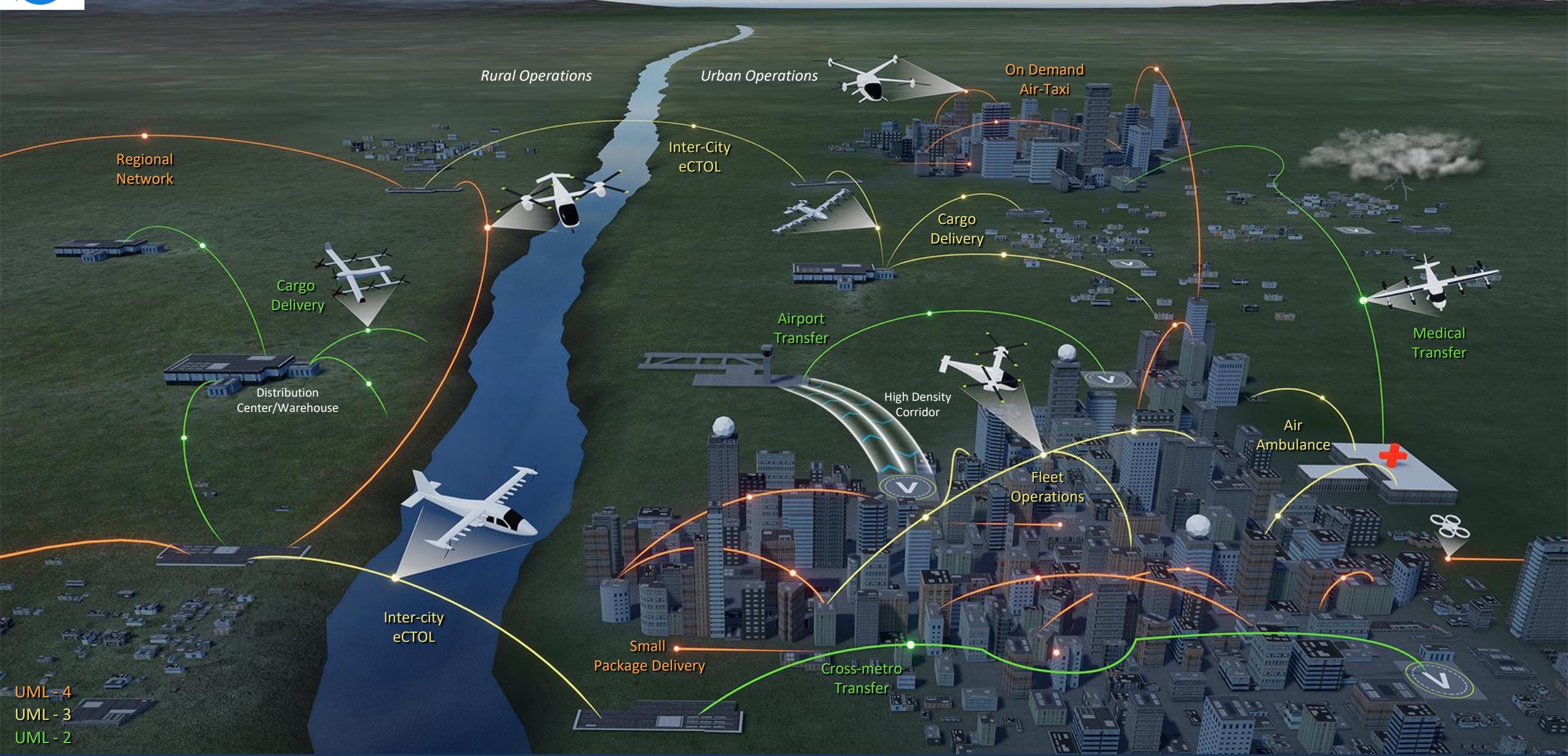
Safe, sustainable, affordable, and accessible aviation for transformational local and intraregional missions

- Includes “rural” and “urban” applications
 - cargo transport, pax-carrying, aerial work, etc.
 - eVTOL, sUAS, eCTOL, hybrid-electric, etc.
 - Urban Air Mobility (UAM) as a challenging use-case with high benefit
- Enabled by electrification and scaled through automation
- Does not include:
 - Supersonic or hypersonic transport
 - Existing hub-and-spoke air service with large transport aircraft





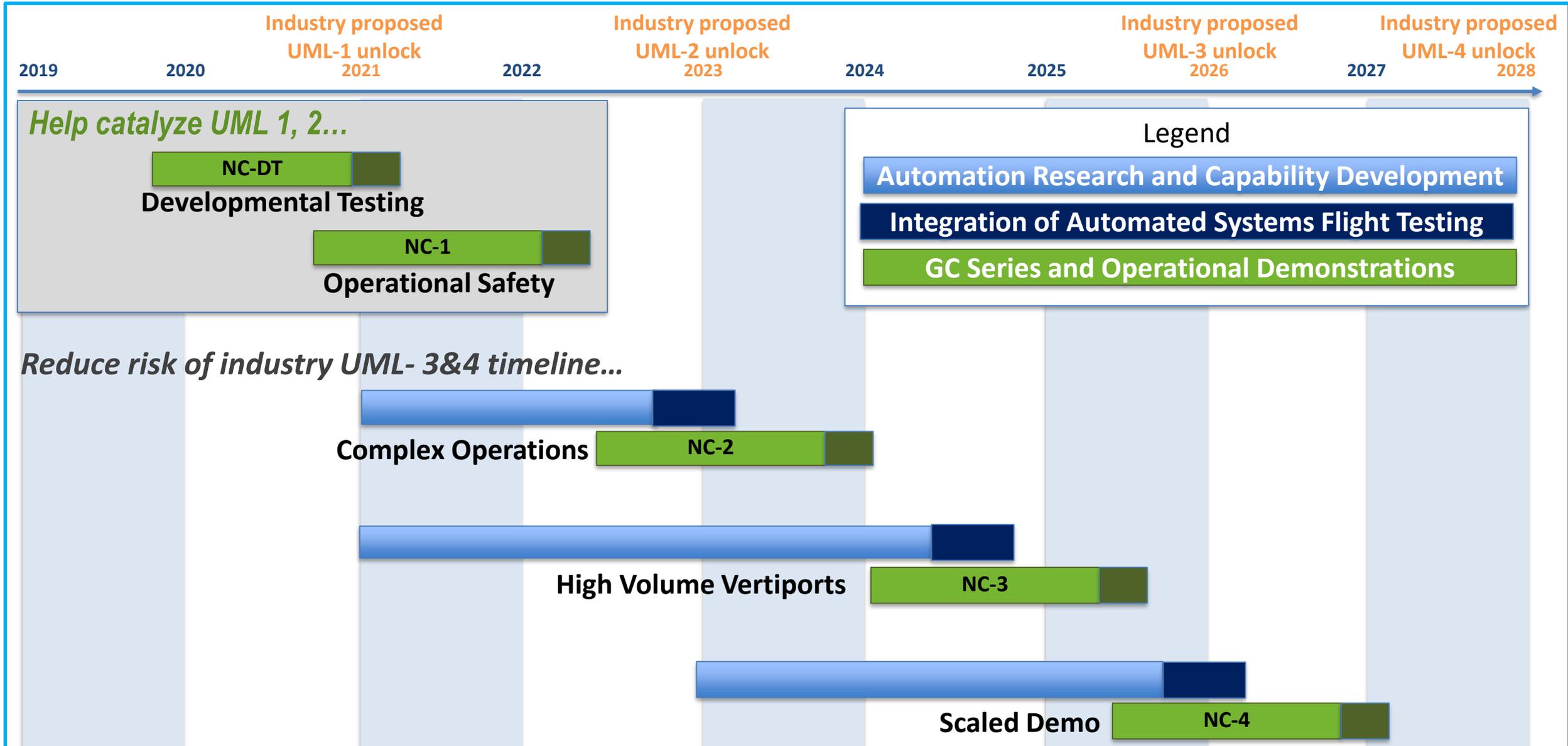
Advanced Air Mobility (AAM) Mission



Develop validated AAM System Architectures that define a safe, certifiable, and scalable system



NASA Research to enable National Campaigns



Help catalyze UML 1, 2...

NC-DT
Developmental Testing

NC-1
Operational Safety

Legend

- Automation Research and Capability Development
- Integration of Automated Systems Flight Testing
- GC Series and Operational Demonstrations

Reduce risk of industry UML- 3&4 timeline...

Complex Operations

High Volume Vertiports

Scaled Demo

NC-2

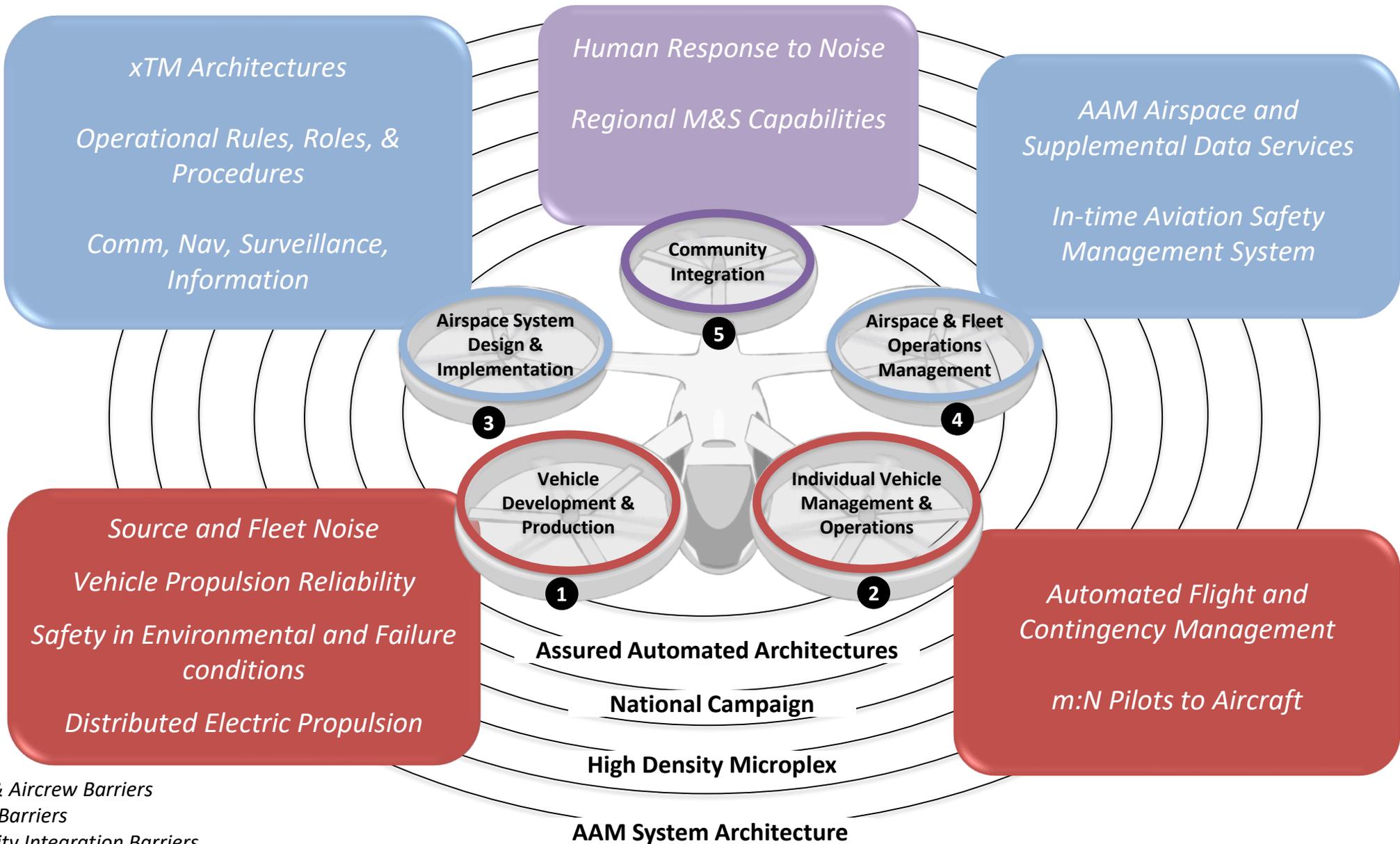
NC-3

NC-4

UML "unlocks" based on a range of publicly available industry projections; not a consensus view



NASA AAM Mission Priorities



xTM Architectures

Operational Rules, Roles, & Procedures

Comm, Nav, Surveillance, Information

Human Response to Noise

Regional M&S Capabilities

AAM Airspace and Supplemental Data Services

In-time Aviation Safety Management System

3

Airspace System Design & Implementation

5

Community Integration

4

Airspace & Fleet Operations Management

1

Vehicle Development & Production

2

Individual Vehicle Management & Operations

Source and Fleet Noise

Vehicle Propulsion Reliability

Safety in Environmental and Failure conditions

Distributed Electric Propulsion

Assured Automated Architectures

National Campaign

High Density Microplex

Automated Flight and Contingency Management

m:N Pilots to Aircraft

AAM System Architecture

- Aircraft & Aircrew Barriers
- Airspace Barriers
- Community Integration Barriers
- # Pillar number