INTERAGENCY ANNEX
BETWEEN
THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AND
FEDERAL AVIATION ADMINISTRATION
UNDER INTERAGENCY UMBRELLA AGREEMENT NO. 31919, (ANNEX NUMBER 1)

ARTICLE 1. PURPOSE

The National Aeronautics and Space Administration (NASA) Aeronautics Research Mission Directorate (ARMD) plans to host an Advanced Air Mobility (AAM) "National Campaign" (NC) series with a goal to promote public confidence and accelerate the realization of emerging aviation markets for passenger and cargo transportation in urban, suburban, rural, and regional environments.

NASA and the FAA intend to collaborate throughout all stages of the AAM National Campaign, from planning and scenario validation to AAM National Campaign execution. FAA internal lines of business and stakeholders across multiple lines of business under the FAA Organizations of Air Traffic Organization (AJO), Airports (ARP), Aviation Safety (AVS), as well as stakeholders across multiple staff offices (*e.g.*, NextGen (ANG)), intend to provide subject matter expertise and technical support where possible to advance AAM National Campaign objectives and ensure information captured from lessons learned informs FAA. The data collected will help inform the FAA for development of appropriate policies and procedures to enable integration of Advanced Air Mobility (AAM) concepts into the National Airspace System (NAS).

ARTICLE 2. RESPONSIBILITIES

A. NASA will use reasonable efforts to:

1. Provide airworthiness reviews with vehicle companies and their operations at external ranges.
2. Develop and utilize an agreed upon platform to share data from various FAA and NASA data sources.
3. Provide Live Virtual Construct for NASA's AAM NC Series.
4. Provide Flight Test Infrastructure to support connectivity between vehicle, range and airspace service providers.
5. Provide virtual city and background traffic emulations.
6. Establish a connection between the FAA's Mike Monroney Aeronautical Center (MMAC) Air Traffic Control Training Lab and NASA's Live Virtual Construct (LVC) for conducting research to advance the development and integration of emerging aerospace technology.
7. Work collaboratively in the area of Human Factors Research to facilitate the development and implementation of emerging aerospace technology.
8. Work collaboratively to develop and implement accident investigation reporting processes and procedures to support the integration of emerging aerospace technology.

9. Work collaboratively with FAA's Flight Program Office (AJF) for implementation of Flight Inspection Airborne Processing Application (FIAPA) Software to support integration of emerging aerospace technology/
10. Facilitate regularly scheduled Scenarios Technical Working Group meetings.
11. Develop NC scenarios in partnership with the FAA and industry.
12. Measure FAA data requirements during NC Series.
13. Work with FAA on agreed upon data models and data management plan.
14. Develop the statement of work for the Helicopter Dry Run Test with input from the FAA.
15. Provide External Ranges for Flight Test Infrastructure and data collection throughout the NC Series.
16. Provide FAA access to recorded data throughout the NC Series.
17. Work with FAA to establish an Information Technology security agreement between NASA and FAA networks.
18. Develop a joint NC Flight Test Report for each NC Series demonstration tests.
19. Work with FAA, and vehicle providers to design, test, and measure experimental flight procedures and navigation services to enable emerging aerospace technologies.
20. Provide guidance on developmental traffic flow, sequencing, and separation technologies required to track, enforce, and manage Urban Air Mobility (UAM) operations.
21. Collaborate with FAA and industry partners on Microclimate weather factors, research, and forecasting.
22. Provide a test bed and ground infrastructure for UAM Vertiport evaluation, certification, and registration research required for NAS integration.

B. FAA will use reasonable efforts to:

1. Develop and utilize an agreed upon platform to share data from various FAA and NASA data sources.
2. Provide NASA Surveillance and Broadcast Services Monitor (SBSM) connectivity for NC Flight Series.
3. Establish a virtual connection between FAA's MMAC Air Traffic Control Training Lab and NASA's Live Virtual Construct or conducting research to advance the development and integration of emerging aerospace technology.
4. Work collaboratively in the area of Human Factors Research to facilitate the development and implementation of emerging aerospace technology.
5. Work collaboratively to develop and implement accident investigation reporting processes and procedures to support integration of emerging aerospace technology.
6. Work collaboratively with NASA on the implementation of FIAPA Software to support integration of emerging aerospace technology.
7. Provide FIAPA flight test pilot support for the Helicopter Dry Run Tests and NC Series.
8. Support NASA's regularly scheduled Scenarios Technical Working Group meetings.
9. Provide Pilot Training Support for Simplified Vehicle Operations.
10. Work with NASA on agreed upon data models and data management plan.
11. Develop flight test plan for NC Helicopter Dry Run.
12. Provide FAA Certified test pilot and flight test engineer for Dry Run Helicopter Flights.
13. Provide Airworthiness Certified personnel for NASA Flight Readiness Review (FRR) team.

14. Assist with Flight Checks for NC terminal base operations throughout the NC Series.
15. Analyze NASA Measured data throughout the NC Series.
16. Work with NASA to establish an IT security agreement between NASA and FAA networks.
17. Assist with safety reviews of UAM operations at existing Airports where commercial NC Vehicle Partners plan to operate during the NC Series flight test demonstrations.
18. Work on a joint NC Flight Test Report for each NC Series demonstrations.
19. Assist in the development and design of novel procedures for UAM airspace integration being researched throughout the National Campaign.
20. Assist in the evaluation, certification, and validation of NASA NC Series test site selections.

ARTICLE 3. SCHEDULE AND MILESTONES

The planned major milestones for the activities in the Annex defined in the "Responsibilities" Article are as follows:

1a	NASA and FAA develop Joint NASA/FAA Dry Run Vehicle characterization, Airspace Routes & Infrastructure (Completion Date)	Jan 2021
1b	FAA Analyze NASA Measured Helicopter Dry Run Test Data (Start Date)	Feb 2021
2a	NASA and FAA develop Joint NASA/FAA Developmental Test Vehicle Characterization, Airspace Routes & Infrastructure (Completion Date)	Feb 2021
2b	FAA Analyze NASA Measured Developmental Test Data (Start Date)	May 2021
3a	NASA and FAA develop Joint NASA/FAA NC-1 Vehicle Characterization, Airspace Routes & Infrastructure (Completion Date)	Jun 2021
3b	FAA Analyze NASA MeasuredNC-1 Dry Run Flight Test Data (Start Date)	Feb 2022
3c	FAA Analyze NASA MeasuredNC-1 Test Data (Start Date)	Jun 2022
4a	NASA and FAA develop Joint NASA/FAA NC-2 Vehicle characterization Airspace Routes & Infrastructure (Completion Date)	Jun 2023
4b	FAA Analyze NASA MeasuredNC-2 Dry Run Test Data (Start Date)	Feb 2024
4c	FAA Analyze NASA MeasuredNC-2 Test Data (Start Date)	Jun 2024

ARTICLE 4. INTELLECTUAL PROPERTY RIGHTS - DATA RIGHTS - IDENTIFIED INTELLECTUAL PROPERTY

A. Under paragraph C of the *Intellectual Property Rights - Data Rights - Handling of Data* Article of the Umbrella Agreement, Disclosing Party provides the following Data to Receiving Party. The lists below may not be comprehensive, are subject to change, and do not supersede any restrictive notice on the Data

1. Third Party Proprietary Data:

    - Vehicle Characteristics Data

2. Controlled Government Data:

    - NASA Measured Helicopter Dry Run Test Data
    - NASA Measured Developmental Test Data
    - NASA Measured NC-1 Dry Run Flight Test Data
    - NASA Measured NC-1 Test Data
    - NASA Measured NC-2 Dry Run Test Data
    - NASA Measured NC-2 Test Data

3. The following software and related Data will be provided to Partner under a separate Software Usage Agreement:
    None

ARTICLE 5. TERM OF ANNEX

This Annex becomes effective upon the date of the last signature below ("Effective Date") and shall remain in effect until the completion of all obligations of both Parties hereto, or five years from the Effective Date, whichever comes first, unless such term exceeds the duration of the Umbrella IAA. The term of this Annex shall not exceed the term of the Umbrella IAA. The Annex shall automatically expire upon the expiration of the Umbrella IAA.

ARTICLE 6. RIGHT TO TERMINATE

Either Party may unilaterally terminate this Annex by providing thirty (30) calendar days written notice to the other Party.

ARTICLE 7. POINTS OF CONTACT

The following personnel are designated as the Points of Contact between the Parties in the performance of this Annex.

Management Points of Contact:	
NASA Starr Ginn AAM National Campaign Lead 4800 Lilly Ave, Edwards, CA 93523 Phone: (661) 276-3434 starr.r.ginn@nasa.gov	Federal Aviation Administration Emanuel Cruz Manager, Implementation Branch (AUS-440) 800 Independence Avenue, SW Washington, DC 20591 Phone: (202) 267-4981 emanuel.cruz@faa.gov
Administrative Points of Contract: NASA Irma Rodriguez (Agreement Manager) Partnership Coordination Lead, ARMD 300 E Street, SW Washington, DC 20546 (202) 358-0984 irma.c.rodriguez@nasa.gov	Federal Aviation Administration John Raper (or assigned COR) Program Manager, ANG-A17 800 Independence Avenue, SW Washington, DC 20553-0001 Phone: (202) 267-4401 john.raper@faa.gov Federal Aviation Administration Linwood Gillette Contracting Officer, AAQ-330 800 Independence Avenue, SW Washington, DC 20553-0001 Phone: (202) 267-5103 linwood.gillette@faa.gov

ARTICLE 8. MODIFICATIONS

Any modification to this Annex shall be executed, in writing, and signed by an authorized representative of NASA and the FAA. Modification of an Annex does not modify the terms of the Umbrella Agreement.

ARTICLE 9. SIGNATORY AUTHORITY

Approved and authorized on behalf of each Party by:

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	FEDERAL AVIATION ADMINISTRATION
BY: EDGAR WAGGONER Digitally signed by EDGAR WAGGONER Date: 2020.12.15 18:06:19 -05'00'	BY: STEVEN W BRADFORD Digitally signed by STEVEN W BRADFORD Date: 2020.12.21 09:52:36 -05'00'
Edgar Waggoner	Steve Bradford
Deputy Associate Administrator for Programs, Aeronautics Mission Directorate	Chief Scientist – Architecture and NextGen Development
NASA	FAA
DATE:_____	DATE:_____