

NATIONAL CAMPAIGN – 1 INFRASTRUCTURE ANNEX
BETWEEN
THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AND

UNDER SPACE ACT UMBRELLA AGREEMENT

ARTICLE 1. PURPOSE

This Annex shall be for the purpose of allowing Partner to test and demonstrate its Beyond Visual Line of Sight (BVLOS) Detect and Avoid (DAA) System infrastructure through integrated National Campaign – 1 (NC-1) activities in a representative AAM flight environment.

ARTICLE 2. RESPONSIBILITIES

A. NASA will use reasonable efforts to:

1. Dedicate NASA management and systems engineering teams to develop and execute the NC-1 activity and coordinate with Partner and its infrastructure and any associated hardware/software system capabilities to support execution of NC-1 integrated scenarios involving Partner's systems.
2. Provide a liaison to facilitate participant system connection to the NC Flight Test Infrastructure (FTI) system, including development of an Interconnection Security Agreement in accordance with NIST 800-47.
3. Define and provide the NC FTI system architecture to support the connection and evaluation of the Partner infrastructure service, hardware, and/or software and data collection.
4. Provide a NC FTI system interface and method for Partner to check connection and data formats with the NASA NC FTI system.
5. Integrate Partner-provided infrastructure systems within the NC FTI system. Specific details of the FTI interface requirements will be provided to the Partner after signing Annex.
6. Provide guidance documentation on NC-1 data gathering and data collection requirements.
7. Provide NASA flight test opportunity for Partner to demonstrate and evaluate their infrastructure systems and services as part of a NASA flight test.
8. Collect Partner infrastructure data during execution of the NC-1 scenarios. This includes information provided as part of the infrastructure service as well as data regarding the quality, robustness, and security of the provided service.
9. Publish a final report with the findings from NC-1 that covers the Partner activities and results.
10. Provide a set of NC-1 range requirements to Partner that intends to arrange their own NC-1 flight activities that details the requirements for Partner NC-1 infrastructure demonstration and evaluation conducted at a test range external to NASA. The NC-1 range requirements include: instrumentation, infrastructure and safety requirements, and

allowance for NASA to be present at and monitor NC-1 activities. Review range capabilities of Partner's range provider to ensure they are consistent with the NC-1 range requirements.

B. Partner will use reasonable efforts to:

1. Provide documentation of intent of Partner to demonstrate and evaluate their AAM operations infrastructure as part of flight activities arranged by Partner, and/or as part of a NASA provided NC-1 flight activity.
2. Provide an infrastructure system (or system components) that can be demonstrated and evaluated against NC-1 flight scenarios.
3. Provide design documents specifying infrastructure system capabilities, input requirements, and intended final use.
4. Provide an infrastructure system concept of operations, assumptions and system design.
5. Interface with the NC FTI system through NASA defined interfaces or protocols.
6. Provide an existing company System Security Plan to be reviewed by NASA for content required for the Interconnection Security Agreement.
7. Share Partner-recorded data to verify system functionality.
8. Comply with the NASA communications and any other interfaces that NASA defines for the NC-1 activity and provide real-time data during execution of NC-1 scenarios.
9. Provide necessary data to evaluate system capabilities including information such as response times and message latency information.
10. Provide input to NASA covering Partner lesson learned, details of flights supported and services provided, and scenarios supported. This input will be used by NASA to write the report referenced in the NASA responsibilities section.
11. For Partner arranged flight activities, provide a description of the flight vehicle that will be used to demonstrate and evaluate the Partner infrastructure, and a description of the intended range or location for NC-1 flights. Partner shall be responsible for assuring that the range can accommodate NASA attendance at all NC-1 flight activities with sufficient support to allow NASA to view and perform all actions necessary in the conduct of the NC-1 flight activities. Partner will ensure that the test range meets the NC-1 range requirements provided by NASA.
12. Provide a description of how the Partner infrastructure would be demonstrated and evaluated as part of NC-1, a schedule for NC-1 flight activities, and a description of the NC-1 scenarios that would be used to demonstrate and evaluate Partner infrastructure systems and services. Provide a list of any partners and partner capabilities that will be leveraged for Partner NC-1 infrastructure demonstration and evaluation activities, and any other information relevant to Partner NC-1 activities.

ARTICLE 3. SCHEDULE AND MILESTONES

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

NASA to provide NC Flight Test Infrastructure system documentation and interface details.	Within 1 month of signing Annex
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NASA to provide a liaison contact to help Partner in developing Interconnection Security Agreement.	Within 1 month of signing Annex
Partner to provide documentation of their plans to test and demonstrate their infrastructure as part of a Partner arranged flight test and/or a NASA flight test, including a schedule and any other relevant information. Partner to provide descriptions of NC-1 flight activities and the NC-1 scenarios that will be used to demonstrate the Partner infrastructure.	Within 1 month of signing Annex
Partner to provide existing System Security Plan – System Security Plan covering Partner test network, to be reviewed by NASA for content required for Interconnection Security Agreement	Within 1 month of signing Annex
Partner to provide hardware and/or software system functional description of infrastructure system or service – Document describing the functionality of the hardware/software components to be used for NC-1 flight demonstrations.	Within 3 months of signing Annex
NASA to provide Data Recording Documents, and any other needed documents, that define NASA and Partner data collection during NC-1 flight demonstrations.	3 months prior to flying in NC-1
Partner to demonstrate and document compliance with NC FTI system interface.	1 month prior to flying in NC-1
Partner to conduct NC-1 flight activities at an external range and/or participate in a NASA provided flight test for the demonstration and evaluation of Partner infrastructure systems and services.	January 2022 – November 2022
Partner to provide input to NASA covering Partner lessons learned, details of flight activities and scenarios supported.	March 2023
NASA to provide final report with findings from NC-1 flight activities to demonstrate integrated vehicle/airspace scenarios.	March 2023

ARTICLE 4. INTELLECTUAL PROPERTY RIGHTS - DATA RIGHTS

A. Data produced under this Annex which is subject to paragraph C. of the Intellectual Property Rights - Data Rights Article of the Umbrella Agreement will be protected for the period of five (5) years.

B. Under paragraph H. of the Intellectual Property Rights - Data Rights 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 provided.

1. Background Data: The Disclosing Party's Background Data, if any, will be identified in a separate technical document.
2. Third Party Proprietary Data: The Disclosing Party's Third Party Proprietary Data, if any, will be identified in a separate technical document.

3. Controlled Government Data: The Disclosing Party's Controlled Government Data, if any, will be identified in a separate technical document.
4. 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 Agreement. The term of this Annex shall not exceed the term of the Umbrella Agreement. The Annex automatically expires upon the expiration of the Umbrella Agreement.

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

National Campaign Lead

Advance Air Mobility Project

Mail Stop: 2701

P.O. Box 273

Edwards, CA, 93523-0273

Phone: 661-276-3434

Email: starr.r.ginn@nasa.gov

ARTICLE 8. MODIFICATIONS

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

ARTICLE 9. SIGNATORY AUTHORITY

The signatories to this Annex covenant and warrant that they have authority to execute this Annex. By signing below, the undersigned agrees to the above terms and conditions.

NATIONAL AERONAUTICS AND
SPACE ADMINISTRATION

BY: _____
Mr. Jon Montgomery
Deputy Associate Administrator for
Policy, Aeronautics Research Mission
Directorate

BY:  _____

DATE: _____

DATE: 2 April 2021