



BNBATP

Project F.A.T.I.M.A.



BNBATP MASSACHUSETTS PROPOSAL:



FUTURE AVIATION TECHNOLOGY
INTEGRATION MANAGEMENT AGENCY



Objectives:

- Integrating UAV/UAS into the transportation in the US per FAA regulations and standards.
 - Starting in the state of MA (beginning with Brookline, the birthplace of JFK)
 - Drone Package Delivery
- AAM
 - RAM
 - UAM
 - Conduct first flight test for AAM in state of MA.
- Creating the first equity focused aviation workforce program in the country.
- IMPACT:
 - Creating economic prosperity and opportunities for UAV businesses that will create jobs and economic opportunity for the residents of MA.

Feasibility Study Breakdown:

- Why is it necessary?
 - A feasibility study analyzes the viability of a project to determine whether the project or venture is likely to succeed.
 - We already know that this endeavor is doable and successful as we have seen in cities in Texas with the company WING.
 - There has been a lot of success and proliferation of the drone industry in Nigeria overseen by Capt. Dami and UFO Aerials.
 - A necessary and crucial step required by the FAA (including meeting FAA safety standards) for all UAV/UAS operations.
 - The study is also designed to identify potential issues and problems that could arise while pursuing the project.
 - Issues that we can figure out solutions for now rather than later in implementation.
 - Issues such as highly congested areas, air traffic control management, routes, etc.

What is Included in the Feasibility Study?

- Assessing public interest in the service through research, assessing ability to deliver (workforce, budget, state funding), airspace study, UATC study*, on ground assessments, priming the public, engaging with businesses.
 - In terms of workforce, BNBATP is effective at recruiting, training, and preparing students to join the workforce. We have another cohort starting this winter. There will be no issue with having to find professionals that can jump right into the field because we are training them.
 - Our workforce also highlights accessibility in and equity with minority workforce development/job creation. Operations can be conducted remotely from a command center which greatly increases accessibility for those that are disabled.
 - We've already demonstrated in the last meeting that bringing drone package delivery to the state fits the state budget and state plans years in advance.
- How are we accomplishing this effectively and efficiently while meeting benchmarks?
 - Let's find out.

Who is Conducting it?

- BNBATP in partnership with UFO Aerials, Green Aviation Global, and Choice Aeronautical Academy
 - BNBATP: Drone Aviation Workforce Program
 - 3 Teams (Alpha, Bravo, Delta)
 - Green Aviation Global: Green certification of zones and structures*
 - Choice Aeronauticals: FAA liaison and safety expert and how UAV/UAS and general aviation intersect safely.
 - Traffic separation, traffic communication
 - UFO Aerials: International partner with experience in Field Operations in communities globally.
 - State: Representative Tommy and others to come.

Where are we Conducting it?

- Brookline, MA
 - UAV/UAS for public safety use (Police, Fire Rescue, EMS)
 - UAV for Drone Package Delivery
 - AAM (UAM) for Public Transportation
 - MBTA and MassDOT have already been researching implementation of UAV/UAS technology into public transportation:
<https://www.mass.gov/doc/aeronautics-board-report-021119/download>

Commencing UAV/UAM Challenge:

- Part of feasibility is commencing the UAV/UAM CHALLENGE: Air operators, Aircraft, Air traffic management.
 - Is a large-scale demonstration program to test the safety, traffic management functions, and suitability of UAV/UAM in an urban environment and to support the commercialization of UAV/UAM
 - Another purpose is to confirm the safety of the UAM aircraft and to demonstrate their integrated operability.
 - This challenge will help prepare a Brookline-style operational standard suitable for domestic weather and urban conditions of UAM. This standard will, at minimum, meet all FAA standards, and exceed them with ICAO standards and then be used in surrounding areas like Boston as we expand.
- Currently, there are six UAV/UAM companies that we know are far along in these challenges that we want to engage with
 - UAV (Zipline, Wings),
 - AAM (Joby, Lilium, Archer, ALEF).

ALEF Flying Car

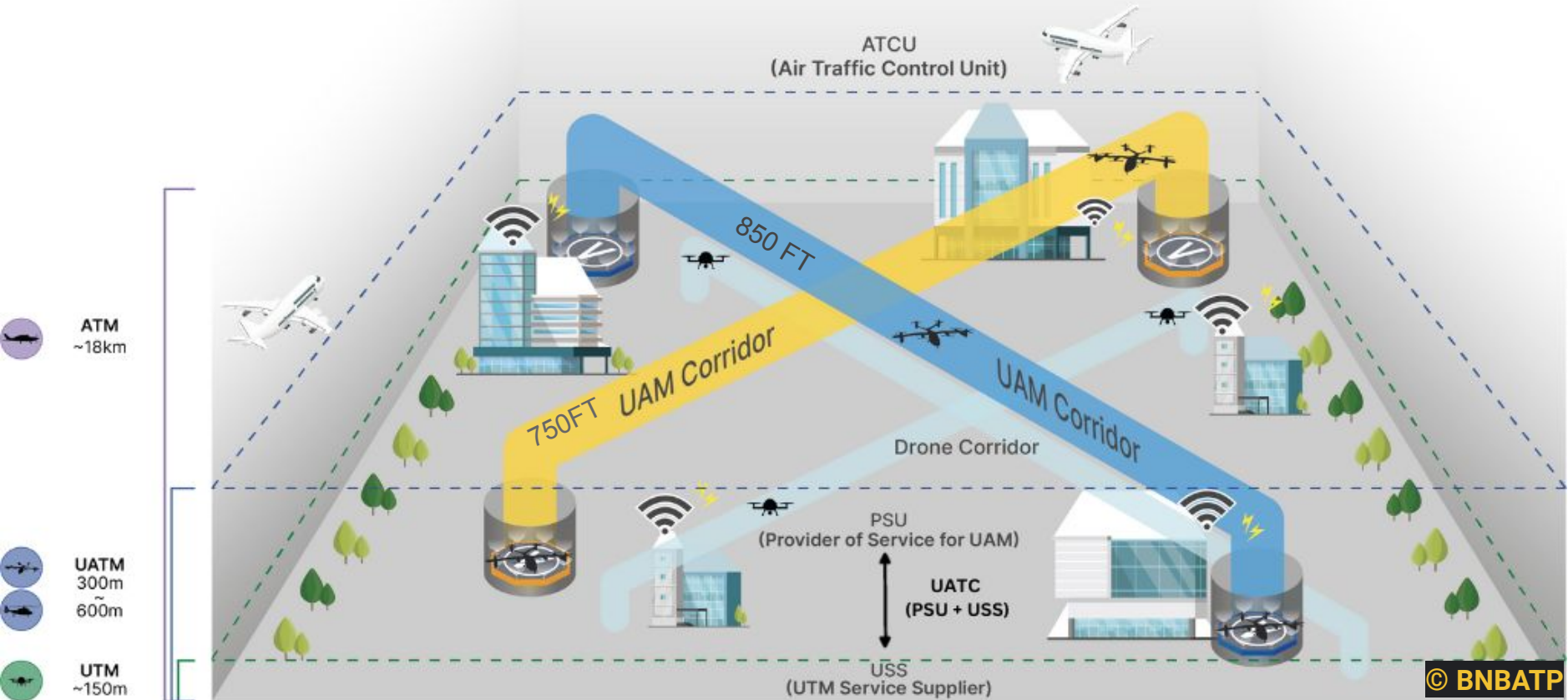
- Example of:
 - AAM (UAM)- transporting people.
- Another example of a company that has made headway in the UAV UAM Challenge is Joby Aviation.
- FAA granted ALEF their airworthiness certificate
- The company expects to sell the vehicle for \$300,000 each with the first delivery by projected for the end of 2025.
- As early as last week a flying taxi company (Beta Technologies) in Vermont was granted \$169M for a production facility, the first production facility of the kind in the north east.
 - <https://www.iotworldtoday.com/flying-vehicles/flying-taxi-company-gets-169m-for-production-facility>
- This industry is moving faster than we are talking.



How are we Conducting it?

- Assessing airspace compatibility: are there airports nearby, are there helicopters landing nearby (helipads), are there any high structures, air traffic management UATC.
 - Helps us determine which areas are highly congested, AKA less safe or more risky to fly in.
 - From there Green Aviation Global will go in and assess housing structures compatibility with drone delivery and certify the zones/structures.
 - This helps with the next step which is mapping.
 - Mapping ensures that we can plan effective and safe routes for deliveries, emergencies, as well as assess what these routes actually look like to fly. This will be used in teaching future cohorts so they are familiar with these routes as they graduate and streamlines them from students to working professionals.
 - UATC: comms & why it is important
 - Discuss the need for FAA approved UATC dept in brookline which will control all drone air work operations
 - Improves Communications between Drone operations and Aircraft operations thereby improving safety.
 - Knowing where all UAV/UAM are at all times.
 - Will be source of income for the town as all Part 135 drone operations in Brookline communicate will be using UATC services.

Airspace and UATC: *an Aviator's Perspective:*



How are we Conducting it?

- Ground Team: The ground team then goes door to door in both areas that we have determined from the prior assessments.
 - Will give presentations and live demonstrations.
 - Then sign up these homes to be the first to be able to utilize this service as it comes into fruition.
- Part of this will include research on interest in UAV UAM services.
 - Research online via polls on popular sites such as Facebook and even leave posters with QR codes around where residents can submit comments and ideas or even ask questions.
 - Potential markets, and businesses that the public would like us to partner with, etc.
 - Elderly and Immunocompromised (medication and pharmacy- Walgreens, CVS)
 - College Students (late night food)- Pizza, Fast Food, Spa Burger, Liquor
 - Community at Large (daily essentials)- Stop N Shop, Trader Joe's, Target, Dunkin Donuts, Starbucks, Nero Coffee
 - UAM- air transport services (private and public use)
 - Public Safety:
 - Police, Fire Rescue, EMS: and assisting with serving and protecting the public.

BNBATP

There is a long road ahead. This is just the beginning. Follow us on our mission to create an equitable, and environmentally sustainable UAV industry in MA, starting with Brookline.