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BETA at a Glance

- Headquartered in Burlington, VT
- 7 years old
- >700 employees
- Privately held
- > 300 patents



BETA is an **aerospace company** that offers sustainable solutions. We are developing systems to enable customers to complete point-to-point, all electric cargo, logistics, passenger, and medical transport missions in all weather conditions.



Electric Aircraft

Zero operational emissions aircraft with distributed propulsion

Charging Infrastructure

Multimodal charging infrastructure to enable EVs of today and tomorrow

Training Programs

Curriculums and immersive simulators to train pilots and mechanics

Committed Partners

BETA's versatile aircraft design supports operators across four verticals, and the company has raised over \$1bn in capital. Up to 550+ aircraft sold to 8 customers who all have deposit backed firm orders.





Economics of Electric Aviation

Lower Energy Costs: Electricity is ~40X cheaper than JetA (not accounting for the sustainability cost of COe)

Cheaper Maintenance: Electric maintenance is ~33% of the cost of maintenance for similar feeder aircraft **Fewer Parts:** ~70% fewer parts than similar-sized turbine aircraft, based on BETA's current bill of materials



Two aircraft, many applications

N250U

ALIA CTOL

All-electric, conventional takeoff & landing airplane for airport-to-airport missions. ALIA VTOL

All-electric vertical takeoff & landing aircraft for urban and rural routes.

Safe | Integrated redundancies and extensive real-world testing

Simple | Air cooling with no articulating motors or propellers

Pragmatic | Purpose-built for simplicity and ease of operation

Quiet | Making missions in populated environments possible

Clear Path to FAA Certification

BETA has taken a thoughtful approach to certification. First certifying an electric propulsion system that will port into a fixed-wing aircraft certifying under existing Part 23 rules. Finally, BETA will certify a VTOL aircraft with 70% commonality with its fixed-wing, easing the path to VTOL deployment.



BAA

Diverse Pilot Training Solutions

Custom training tools and flight simulators

BETA has developed highly realistic, custom flight simulators in-house for aircraft development, pilot training, and stakeholder education

Simulation infrastructure

BETA has multiple flight simulators installed across North America (Vermont, D.C., Ohio, Montreal)

Active training engagements

BETA has deployed two mobile simulators to train +100 military pilots in CA, TX, FL, and OH

ALIA Pilot certification

FAA has granted BETA authorization to train future ALIA pilots - dozens of pilots have flown ALIA

Training as-a-service model

Creating a program to train pilots and maintainers in electric aircraft (partnering with CAE)

Existing Charge Network

There are currently 45 sites online.

Active

BETA has utilized the active charging sites on numerous cross-country missions demonstrating their capabilities, including flights from Vermont to Arkansas, Vermont to Kentucky, and most recently from Vermont to Florida.

BETA also uses its charging infrastructure daily at its Vermont and New York locations in support of flight tests.

Coming Soon

Under Construction

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Charge Industry Alignment: Internationally-Accepted Standard

The leading OEMs have aligned on a common charging standard, seeing this as critical for scalability. The following companies are aligned:





The BETA Charge Cube

CHARGE

320 kW | 50ft retractable cord | CCS Plug | Multimodal | <60 min charge time

The Mini Cube



40-65 kW | 50 feet | Level 3-DC Fast Charger | Multimodal | Mobile

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Charge Cube vs. Minicube





	Charge Cube	Minicube / Minicube+
Power Rating	320 kW	40 kW & 65 kW
Installation	Fixed	Mobile
AC Voltage Connection	480 Vac, 3 Phase, 60 Hz	480Vac, 3 Phase, 60 Hz
AC Grid Current	Up to 420 Amps	Up to 60 Amps / 100 Amps
Battery Charge Range	Up to 1,000 Vdc	Up to 1,000 Vdc
Charging Protocol	CCS	CCS
Typical use case	Charging mid-mission or when a Charge Cube is present at home base.	Charging in hangar or when a Charge Cube isn't present at home base.



The BETA Charge mobile app augments the charging experience on the ground

Available on iOS and Android

Beta North Hangar	۵		TOUT					
South Parking Lot	1.2 mi	N.	25001					
1150 Airport Dr, South Burlington, '	ντ		HARGING					
Location offers employee and chargers on the East and Wes North parking lot. Aircraft ch	visitor EV t sides of its Show More							
		STATI	OF CHARGE					
		839	6 320 kV					
Plugs	8/18 available	ENERGY GAINED	COST					
0000 • AVAILABLE	7 kw >	243.27kWh TIME CHARGED	\$109.1 PLUG ID					
8024 • UNAVAILABLE	7 kW >	44m	#1340					
8028 UNAVAILABLE	7 kW >	End	End Session Need Help?					
8032 • AVAILABLE	125 kW >	Ne						
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View plug availability by location Monitor your charge sessions in real time

Manage multiple vehicles on one account



Personalized Dashboard to Monitor Infrastructure







Breaking Down Barriers

Our Team





BDB Cofounder & Philantropic Leader

Airlines CEO



CEO BDB & Former airline pilot



Breaking Down Barriers Our Board of Directors























Breaking Down Barriers

Our Mission

To break down the financial, educational, outreach, and awareness barriers that exist for underrepresented minorities and their communities. BDB will work with communities to create aviation opportunities for underrepresented youth and provide flight training scholarships to qualified minorities.

*BDB provides flight training scholarships to qualified candidates valued at \$100,000





3.4% of Airline Transport Pilots identify as Black/African American



0.5% of Airline Transport Pilots identify as a female Black/African American

Breaking Down Barriers

Our Focus





Flight Training Scholarships Community Building Industry Diversification Mentorship



Qualities of a Successful Pilot





LIFE LONG LEARNER



COACHABLE





FLIGHT TRAINING SCHOLARSHIP

Private

5 flight lessons and 5 ground lessons per week 3 months

Instrument

5 flight lessons and 5 ground lessons per week 2 months

Commercial Single-Engine

3

5 flight lessons and 5 ground lessons per week 4 months Commerical Multi-Engine

4

5 flight lessons and 5 ground lessons per week 1 month

al 1**e** nd 5 per

Certified Flight Instructor

5

5 flight lessons and 5 ground lessons per week 1 month

Certified Flight Instructor Instrument

6

5 flight lessons and 5 ground lessons per week 1 month

*12-18 months of training *\$75,000 - \$100,000 value



BREAKING DOWN BARRIERS SUPPPORT

Financial Support

Scholarship covers all required items to successfully accomplish your certificates.

Career Guidance

BDB will provide career guidance and interview prep to help you secure postion as a flight instructor or a Part 135 pilot.





Weekly Ground Training

BDB will host weekly ground training sessions to cover additional traing topics.

Mentorship

Each candidate will be paired with a mentor who will support you along the way.

BDB Flight Training Scholarship Requirements:







Pass first class medical



First generation pilot



Financial need scholarship



BDB APPLICATION PROCESS

Interest Meeting

Learn about BDB and the skills it takes to become a pilot

Application

2

Complete BDB scholarship application

Assessment

3

Complete pilot aptitude assessment Interview & Modical

4

Medical

Conduct interview with BDB Board and accomplish FAA First Class Medical

Scholarship Commitment Review

5

Receive scholarship and review training commitment

Begin Flight Training

6

Meet your flight instructor and begin ground school and flight training



BDB Flight Training Scholarship Recipients



Shakeel - Dallas



Drew - Dallas College



Dante - BOMLA



Kyra - Dallas College



Zahad - Carter HS



Jonathan - John Dubiski Career HS



Reet - Mansfield Early College HS



Brittney - Dallas College



Jermaine - Newman Smith HS







NCTCOG Freight Optimization System

NCTCOG Aviation Committee

November 2024



Project Context

- DFW is the largest inland port & distribution ecosystem in the US
- 40+ Freight-Oriented Developments (FODs)
- Shippers send trucks through traffic signals to/from FODs to expressways
- Additional regional & local distribution on major arterials

TxDOT: Texas Connected Freight Corridors Program





Project Vision







No cost to local agencies and truck operators





Self-sustainable after 5 years operations and no new equipment











NCTCOG Freight Signal Priority Architecture



GLOSA Green Light Optimized Speed Advisory



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← MAIN MENU		TSP LC	G ISSUES		ROUTE	COMPARE	SYSTEM						Select:	Today	Yesterday	Custom	-
Priority Insights		Route ID	^e Route	Direction	ı Signal		Vehicle ID	Date	Geofence start	Geofence end	TSP granted	Signal Respon	se	Phase	Grant duration	Return duration	
Live Status	۲	1	N. Lamar/S. Congre	ss NB	N. Lamar Blvd.	/ Barton Springs Rd.	54	Fri Oct 1, 2021	6:45:03 pm	6:45:03 pm	x	Early green			00:45	01:03	
Reports	۰	1	N. Lamar/S. Congre	ss NB	N. Lamar Blvd.	/ W. Riverside Dr.	54	Fri Oct 1, 2021	6:45:53 pm	6:45:53 pm	x	Early green, extend green	1		00:45	01:03	
Configure	۰	1	N. Lamar/S. Congre	ss NB	N. Lamar Blvd. St.	/W. Cesar Chavez	16	Fri Oct 1, 2021	6:46:14 pm	6:46:14 pm	x	Early green			00:45	01:03	
	۲	1	N. Lamar/S. Congre	ss NB	N. Lamar Blvd.	/ W. 5 th St.	10	Fri Oct 1, 2021	6:46:59 pm	6:46:59 pm	x	Early green			00:45	01:03	
	۰	1	N. Lamar/S. Congre	ss NB	N. Lamar Blvd.	/ W. 6 th St.	15	Fri Oct 1, 2021	6:47:34 pm	6:47:34 pm		Insufficient occupa	ncy				
	۰	1	N. Lamar/S. Congre	ss NB	N. Lamar Blvd.	/ W. 10 th St.	16	Fri Oct 1, 2021	6:48:16 pm	6:48:16 pm	x	Extend green			00:45	01:03	
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		1	N. Lamar/S. Congre	ss NB	N. Lamar Blvd.	/ W. 15 th St.	10	Fri Oct 1, 2021	6:49:04 pm	6:49:04 pm		Insufficient schedu	le				
		1	N. Lamar/S. Congre	ss NB	N. Lamar Blvd. King Jr Blvd.	/ W. Martin Luther	15	Fri Oct 1, 2021	6:49:37 pm	6:49:37 pm		Crossing route					
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		1	N. Lamar/S. Congre	ss SB	S. Congress Av	/e. / W. 15 th St.	4	Fri Oct 1, 2021	6:54:17 pm	6:54:17 pm	x	No Adjust			00:45	01:03	
		1	N. Lamar/S. Congre	ss SB	S. Congress Av	/e. / W. 12 th St.	22	Fri Oct 1, 2021	6:54:53 pm	6:54:53 pm		Crossing route					
		1	N. Lamar/S. Congre	ss SB	S. Congress Av	/e. / W. 10 th St.	22	Fri Oct 1, 2021	6:55:26 pm	6:55:26 pm		Crossing route					
		1	N. Lamar/S. Congre	ss SB	S. Congress Av	ve. / W. 6 th St.	12	Fri Oct 1, 2021	6:56:01 pm	6:56:01 pm		No Adjust					
		1	N. Lamar/S. Congre	ss SB	S. Congress Av	ve. / W. 5 th St.	13	Fri Oct 1, 2021	6:56:48 pm	6:56:48 pm	x	Early green			00:45	01:03	
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LOG OUT

≡ »Traction



»TractionPriority Freight Optimization Services Project

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Powered by **Kimley Horn**

»TractionPriority Freight Optimization Services Project

Fuel Savings Event List Dashboard

U Travel Time

> P) Fuel

Savings

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Freight

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Emissions Reduction



20,000 TRUCKS TOTAL IN PROJECT AREA

Powered by **Kimley**»Horn

Jan



Date Range: Custom

Agency: All ×

Time Range: Daytime ×

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Council of Governments

Questions? Freight fleet suggestions?



North Central Texas Council of Governments

Kimley **»Horn**

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www.freightpriority.com







NCTCOG PRESENTATION Airport Parking Map Discussion

Anthony Padilla | James McLane Air Transportation Advisory Committee | 11.7.2024

World Cup 2026

8 World Cup matches in the region will strain the region's transportation system, including airports

An increase in general aviation traffic is expected at many regional airports, and aircraft parking space may be congested





Context

Aviation Team would like to track parking

Approached us with a request to create interactive map(s) related to airport parking

The agency's GIS infrastructure allows for these products to be generated fairly easily







Potential Functionality

Icons/symbols quickly indicating availability of parking

Pop-ups providing more detailed information

Ability to restrict edits/updates to a small group of authorized users (or NCTCOG staff only)

Can be built expanded into a dashboard to provide regional statistics at a glance





Live Demonstration (Link)





5

Outstanding Questions

How frequently should it be updated?

Who maintains the data in the map? Representatives of airports? FBOs? NCTCOG's Aviation or GIS Teams?





Outstanding Questions

Who is the audience?

What attributes do we track? Open/Full status only? Number of spaces available? (By FBO?) Contact information?





CONTACT



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Air Transportation Advisory Committee

November 7, 2024



Regional Airport Funding Update Ernest Huffman



Texas

Annual Funding Comparison







2024 NCTCOG Region

Annual Funding Comparison





Other Updates



Airspace Dashboards



FAA's UAS Traffic Management (UTM) Key Site News

Announcement



FEDERAL AVIATION ADMINSTRATION'S

CENTER FOR ADVANCED AVIATION TECHNOLOGIES



BACKGROUND

As one of the authors of the FAA Reauthorization Act of 2024, Senator Ted Cruz championed a provision authorizing the creation of a Center for Advanced Aviation Technologies

Center for Advanced Aviation Technologies Legislation Sec. 961 of the FAA Reauthorization Act of 2024



ESTABLISHMENT PLAN

CONSULT

08 / 14 / 2024 dates 90 days after enactment to when the FAA Administrator is required to develop a plan to establish the center

Goal to support new and emerging aviation technologies, including:

- Advanced Air Mobility (AAM) and
- Powered-lift Aircraft

Advanced Air Mobility Working Group

&

Interagency Working Groups

ROLES & RESPONSIBLITIES

The center will develop airspace laboratories and flight demonstration zones to facilitate the safe integration of AAM aircraft into the national airspace system

Establishment of testing corridors to validate air traffic requirements for AAM operations

Partnerships will be promoted between industry, academia, and government for technology development. Identifying and supporting the advancement of new aviation technologies, including powered-lift aircraft

LOCATION CRITERIA

a large commercial airport or large air logistics center

aviation manufacturing with expertise in advanced aviation technologies

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existing FAA facilities or offices

airspace utilized for advanced aviation technology testing proximity to both rural and urban communities

6

State, local, or Tribal governments

programs to support public-private partnerships



academic institutions that offer programs relating to advanced aviation technologies engineering

FUNDING / TIMELINE September 30, \$35 2026 million per year until 2028

INTERACTION WITH OTHER AGENGIES

Leverage the research and testing capacity and capabilities of the **Center of Excellence for Unmanned Aircraft Systems** and, the **unmanned aircraft test ranges**

WHY DALLAS-FORT WORTH?

Senator Cruz hosted an Advanced Aviation Roundtable on 08/30/2024 to discuss why the Center should be in the Dallas-Fort Worth region

PARTCIPANTS INCLUDED:

- Wisk Aero
- Lilium
- Archer Aviation
- Joby Aviation
- DroneUp
- Amazon
- Southwest Airlines

- Venus Aerospace
- Vertical Aviation Intl.
- Wing Aviation
- Ferrovial Vertiports
- Autonomy Research Institute at Texas A&M
- University-Corpus Christi

- DFW Airport, Dallas Love Field, and Perot Field- Fort Worth Alliance Airport
- Bell / Airbus / Lockheed Martin / L3Harris
- FAA Southwest Regional Office
- DFW Airport / Arlington Municipal Airport partnerships with eVTOL manufacturer
- FAA UTM Key Site
- Controlled and uncontrolled airspace
- Ease of access/corridor planning to Choctaw Nation
- NCTCOG UAS Safety and Integration Task Force
- NCTCOG Air Transportation Advisory Committee
- NCTCOG Public Safety Unmanned Response Team
- North Texas Aerial Robotics Initiative
- University of North Texas, University of Texas at Arlington, Dallas College, Tarrant County College
- AllianceTexas Mobility Innovation Zone
- Dallas Inland Port
- Mineral Wells Innovation Zone
- City of Fort Worth Autonomous Vehicle Weather DOT SMART Grant
- NASA National Campaign #2 AAM Flight Testing Corridor

Questions?

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