# **High-Tech Mobility**

The Dallas Region is responsible for some of the world's most innovative mobility solutions. For instance, autonomous vehicle technologies hold the potential to transform the supply chain industry, and eventually the way people travel. Dallas-Fort Worth is leading this transformation due to the region's expertise in artificial intelligence, the ability to run experiments in a variety of real world environments, and a robust and collaborative support network. As a result, Dallas-Fort Worth has attracted the most advanced longhaul autonomous trucking companies which contribute to DFW's status as a hub for solving mobility challenges locally and globally.

## **Recent Mobility Innovation Successes**



At NASA's Future Flight Central virtual tower facility, Joby and NASA completed a series of airspace simulations with a team of participating air traffic controllers evaluating how air taxi operations can be integrated into today's airspace.

#### A hub for autonomous trucking, a testing ground for air taxi operations and drone delivery, the home of micro-mobility solutions. An evolution in transportation and moving products through the supply chain is happening in the Dallas Region.

In 2023, Dallas-based GOTRAX launched its latest electric scooters. the GX1 and GX2, which each have a top speed of more than 30 miles per hour. Also last year the UP.Summit came to North Texas. The three-day, invitation-only event alternates between Dallas and Bentonville, Arkansas and

# **AllianceTexas Mobility Innovation Zone** and Autonomous Technology

At more than 26 thousand square miles. Alliance Texas (AFW) is a mixed-use development that touches both Denton and Tarrant Counties as well as parts of six cities. It was designated as an innovation zone by the city of Fort Worth in 2023 and is owned by Hillwood, a Ross Perot Jr. company.

In 2023, AFW was ranked number 19 in U.S. cargo operations, making it the only nonpassenger hub in the top 20, and underscoring the work happening at the Mobility Innovation Zone (MIZ). The MIZ is its own ecosystem within AFW, where the supply chain is being re-imagined.

The location has a long history of firsts, such as the first industrial airport that now services cargo, corporate, and military aviation traffic, renamed Perot Field Fort Worth Alliance Airport in 2022. Mobility companies like testing and learning at the MIZ because it offers both a real-world environment to commercialize tried and tested technology, as well as private venues to experiment with new ideas.

#### BY LAND ...

Robot delivery companies Gatik, A AM ATCH which tackles the "middle mile," or B2B; Clevon, which focus on the "final mile," or consumer delivery; and Aurora, which has solutions for both passengers and freight, operate at the MIZ.

In preparation for its 2024 launch, Aurora opened the industry's first lane for driverless trucks on busy I-45 in 2023. According to the company, nearly half of all truck freight for the



state moves between Dallas and Houston. BNSF is also at the MIZ. Another key piece of supply chain logistics, BNSF operates one of the largest freight railroad networks in North America-and keeps goods moving with trailers, trucks, and trains at the intermodal facility in Alliance.

#### BY AIR ....



as startups and academic institutions. In 2023, Manna Drone Delivery launched in the U.S., in the Dallas suburb of Northlake, which is affiliated with the MIZ. The Irelandbased company flew chocolate and other treats focuses on the future of transportation and mobility.

Towards the end of the year. California-based Joby Aviation announced a successful series of air traffic simulations with NASA's Ames Research Center based on the Dallas-Fort Worth airspace—which is described as complex and busy.

And the National Science Foundation recognized the region's strength in supply chain and logistics by awarding a \$1 million, 2-year planning grant to build out the logistics innovation ecosystem in North Texas and southern Oklahoma. With the University of North Texas serving as the lead, a consortium of academic institutions and public and private entities are working to promote innovation in areas that include automation, electrification, digital infrastructure, and workforce development. A successful Phase II grant application could provide up to \$160 million over 10 years for the region.

This local news demonstrates the Dallas Region's role in technological advances that have the potential for global reach and impact. And it underscores the innovative thinking that is part of the area's DNA.



to residents' doorsteps. Manna chose the Dallas Region for its U.S. launch because of the region's rapid growth.

This follows the 2022 opening of the second (remote) operations center for Wing, a sister company of Google that provides air traffic control for deliveries. Initial flights went between locations such as Walgreens and easyvet clinics to Little Elm and Frisco

Two other UAV companies with operations at the MIZ are DroneUp and Flytrex. DroneUp is a Virginia-based company that began drone deliveries to Dallas-area communities through its partnership with Walmart in 2022. The company can deliver more than 10.000 eligible Walmart items in packages that weigh a maximum of 10 pounds.

Tel Aviv-based Flytrex also began drone deliveries in 2022-flying restaurant items to Granbury through its partnership with Brinker International, the parent of Chili's and Maggiano's chains.

Fort Worth's Bell Helicopter, NASA,

and Hillwood—which developed AllianceTexas—are partnering on efforts like ground-based surveillance systems that may accelerate the large-scale deployment of electric vertical take-off and landing vehicles (EVTOLs), or air taxis. Bell has also been selected as one of two primary suppliers based in North Texas for Virgin Galactic's next-generation Delta class spaceships. Red Oak's Qarbon Aerospace and Bell were selected to provide subassemblies for the sixpassenger ship that the company expects to put into commercial service in 2026.

#### **PARTNERING FOR THE FUTURE ...**

The MIZ has several collaborative agreements with area organizations to ensure continued innovation. For example, the agreement with the Texas A&M Transportation Institute provides a framework for a think-tank-like environment where mobility opportunities can be explored through research and strategic initiatives.

2024





### **Investing in Tomorrow's Mobility Technologies Today**

The North Texas Center for Mobility Technologies (NTCMT)—a program of the Texas Research Alliance-is dedicated to coordinating expertise among Dallas Fort Worth research universities, companies, municipalities, and public agencies to tackle global mobility technology challenges. It also elucidates the process of finding and applying for grants.

Areas of focus include, but are not limited to: passenger, freight-hauling, and electric vertical take-off and landing (EVTOL) vehicles; drones, LiDAR, radar, machine vision, battery storage, micro-mobility solutions, and 5G.

In partnership with the North Central Texas Council of Governments (NCTCOG), and federal agencies like NASA, the center's main objective is to strengthen the area's research capabilities. It does this by providing private sector access to a network of research universities that have both Texas tier one and Carnegie R1 designations.

It also solicits mobility solutions project proposals seeking matching funds. Each NTCMT project proposal is required to have at least three participants: a non-university partner (e.g. a business, non-profit, or public agency) that puts up half the cost; a partnering North Texas university, which contributes 25 percent of the project cost; and the NCTCOG, which kicks in the remaining 25 percent. There is no floor on project size, and multiple awards are possible, with a ceiling of \$2 million per year.

The NTCMT's work is reflected in things like applying 5G technology to unmanned aircraft, accelerating research on transportation-related projects by facilitating partnerships, attracting industry and academic talent, and strengthening the workforce through undergraduate- and graduate-level projects. The NTCMT also serves as a model and can catalyze the formation of similar regional university networks.