

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 long-haul autonomous trucking companies which contributes to DFW’s status as a hub for solving mobility challenges locally and globally.



Perot Field Fort Worth Alliance Airport. Source: Hillwood

AllianceTexas Mobility Innovation Zone

The Mobility Innovation Zone (MIZ) located within the AllianceTexas footprint connects people, places, and ideas in pursuit of a sound and technologically-driven transportation ecosystem.

AllianceTexas is a 27,000-acre master-planned, mixed-use development in North Fort Worth with a long history of firsts, such as the first industrial airport designed for both cargo and corporate aviation traffic, recently renamed as Perot Field Fort Worth Alliance Airport.



Autonomous trucking testing. Source: Hillwood

With the MIZ, the Alliance development has taken a lead role in mobility innovation in the surface and air transportation industries, primarily for freight movement and product delivery. The MIZ offers mobility companies full access to an extensive commercializing environment for real-world deployments as well as private venues to continue testing new technologies. Companies like Gatik, ConGlobal, Phantom Auto, and Clevon operate out of the MIZ with market-leading advanced mobility innovations. Other

companies are in various stages of testing, scaling, and bringing mobility solutions to the market. Commercialization of technologies that promise to deliver regional economic growth, increase safety, reduce congestion, and help drive national freight policy is encouraged at the MIZ.

In addition to Perot Field, on-site assets include one of BNSF’s largest inland intermodal facilities and an extensive and accessible surface transportation network. A master agreement with the Texas A&M Transportation Institute provides a base for conducting research, managing strategic initiatives, and offering a think tank environment to explore mobility opportunities. And the AllianceTexas Flight Test Center is an 80-acre demonstration area that is highly networked for simultaneous use cases with partners that include Bell Textron, Alphabet’s Wing, NASA, and the University of North Texas.



Flight Test Center. Source: Hillwood



BNSF intermodal facility. Source: Hillwood

Autonomous Vehicles and More

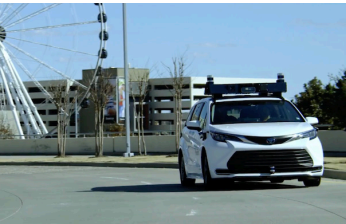
Texas’ less restrictive regulations and the Dallas Region’s business-friendly environment augmented by early and widespread adoption of technologies like 5G and machine learning have set the stage for significant advancements from the autonomous vehicles industry.

■ The Dallas Region is an epicenter for self-driving long-haul trucking companies. Kodiak, Waymo, Einride, Embark, Aurora, Gatik, and TuSimple all have significant operations in the area expanding the frontier of autonomous trucking. Kodiak and Waymo have built new facilities in southern Dallas County while TuSimple, Gatik, and Einride are testing autonomous technologies out of AllianceTexas in Fort Worth. DFW partnership announcements in 2022 included: Waymo with J.B. Hunt Transport Services; Aurora with Uber Freight; Gatik with Pitney Bowes, Georgia-Pacific, and KBX; and Kodiak with U.S. Express.



■ Clevon, an Estonia-based robot courier company, opened its U.S. headquarters in Fort Worth in September 2022. Clevon’s autonomous delivery vehicle is designed to navigate public roads. From its base at AllianceTexas, the all-electric vehicle made its first North American delivery in December. The technology promises to reduce last-mile labor delivery costs by up to 90 percent.

■ Aurora, based in Mountain View, CA, and Pittsburgh, PA, began testing its fleet of self-driving, ride-hailing Toyota robotaxis in 2022, including a ride for Toyota Motor North America’s CEO, Ted Ogawa, from Toyota’s Plano headquarters. Aurora’s self-driving passenger service is expected to launch commercially in late 2024.



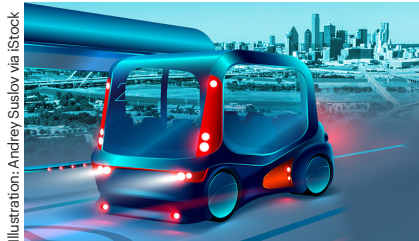
■ Wing, a sister company of Google, opened its second remote operations center in Coppell in 2022. The center provides air traffic control for Wing’s deliveries from locations such as Walgreens and easyvet clinics to neighborhoods in Little Elm and Frisco.

DroneUp, a Virginia-based company, also began drone deliveries to Dallas-area communities through its partnership with Walmart in 2022. DroneUp can deliver more than 10,000 eligible Walmart items weighing up to 10 pounds.

And Tel Aviv-based Flytrex began drone deliveries of restaurant items in 2022 to a Dallas-area suburb through its partnership with Brinker International, the parent of Chili’s and Maggiano’s chains.

■ Fort Worth-based Bell Helicopter, NASA, and Dallas-based Hillwood 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. Along with Red Oak’s Qarbon Aerospace, Bell will provide subassemblies for the six-passenger ship that begins production in 2023.



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 to tackle global mobility technology challenges.

Areas of focus include passenger and freight-hauling autonomous vehicles, electric vertical take-off and landing vehicles (EVTOL), drones, LiDAR, radar, machine vision, battery storage, micro mobility solutions, and 5G.

In partnership with the North Central Texas Council of Governments (NCTCOG), the center’s objectives include:

- Providing private sector access to a cutting-edge research and development network;
- Facilitating university-public sector partnerships on transportation-related projects;
- Attracting industry and academic talent to North Texas;
- Enhancing regional university research capabilities;
- Facilitating mobility and transportation internships for workforce development;
- Facilitating communication and collaboration among North Texas universities on mobility-related grant opportunities; and
- Serving as a catalyst for building similar regional university networks.

The NTCMT also solicits mobility solutions project proposals seeking matching funds. For each NTCMT project proposal, there are at least three required 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 total ceiling of \$2 million per year.