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## **Frequently Asked Questions**

### **Texas A&M Campus Autonomous Shuttle Demonstration**

#### **What is the autonomous shuttle?**

The Navya Autonom Shuttle is an autonomous, self-driving 11-passenger electric vehicle developed for use in public transportation service. It incorporates optimized navigation and safety features, using a variety of guidance and detection systems – LIDAR sensors, cameras and GPS RTK. These systems are coordinated on board by “interpretive deep learning programs,” software that adapts to real-time conditions based on sensor input.

These technologies and intelligent programming allow the shuttle to “drive itself” without human intervention for steering or braking. Indeed, the vehicle does not have a traditional steering wheel or brake pedal. It is programmed to recognize vehicles, pedestrians, bicyclists, and other road users, as well as obstacles in its path, and stops on its own. A safety operator is onboard at all times to take control of the shuttle in the case of an emergency.

#### **Who are our partners?**

The project is a collaboration between Texas A&M University, Texas A&M Transportation Institute, Texas A&M University Transportation Services, and Navya.

#### **Where on campus will it be running?**

The shuttle will operate on a designated route along Lubbock St., Bizzell St., Lewis St., and Coke St. near the Corps of Cadets dorms and Southside Garage on the main campus at Texas A&M University, College Station, Texas. There are two designated stops along this route.

#### **Why was this route chosen?**

Many routes on the Texas A&M campus were considered but this route met Navya’s standards and was approved by the National Highway and Safety Administration (NHTSA).

#### **How long will it be here?**

The research demonstration project is scheduled to run weekdays from 10 a.m. to 4 p.m., Sept. 9 – Nov. 15, 2019. The shuttle will be on static display in the Texas A&M Fan Zone prior to the Texas A&M vs. Lamar home football game on Sept. 14 and the Texas A&M vs. Mississippi State home football game on Oct. 26.

#### **Who is funding this project?**

Texas A&M University is funding this project under the Campus Technology Demonstration Initiative.

**What are the objectives of this demonstration?**

The research project is demonstrating autonomous low-speed shuttle operations in an environment that includes vehicles, pedestrians, bicycles, and other potential obstacles. It also introduces autonomous shuttles to the Texas A&M campus community. The demonstration will help identify the potential of autonomous transit services, including lower-speed shuttles and buses, to improve mobility, connectivity, and safety to support implementation of elements of the recently updated Campus Master Plan. Shuttle riders will be surveyed to help gauge interest and use by students, faculty, staff, and visitors.

**Is this a fully autonomous vehicle?**

This is what's known as a Level 3 autonomous vehicle. It is approved to operate without steering and braking from an operator under a specific set of defined situations. There will be a safety driver on board the vehicle at all times. The shuttle will operate autonomously unless circumstances require human intervention.

**How will the survey and other information collected during the demonstration be used?**

The surveys of shuttle riders and other information collected during the demonstration will be used to inform planning for future transit and transportation options on campus and the surrounding communities. The research demonstration provides the opportunity to examine scientific, engineering and public acceptance elements associated with the introduction of autonomous shuttles and other advanced vehicle technologies.