# Assessing the Safety of Automated Transit Buses

The **Federal Transit Administration (FTA)** asked the **Volpe Center** to study how level 1 and 2 driving automation systems that are available for light-duty vehicles and commercial trucks can be used on transit buses.

This research identified **18 vehicle-level hazards** for the systems. **Two** of the systems are potentially unique to transit buses:

VEHICLE IN MOTION WHEN PASSENGER DOOR IS OPEN

VEHICLE TOO FAR FROM THE CURB AT STATION/STOP
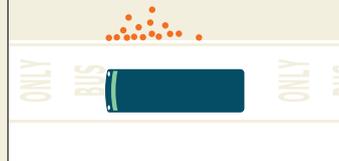
The study also discusses unique challenges that must be faced in an active urban environment.

For example, driving automation systems in transit buses may need to more reliably **detect and safely respond to pedestrians.**

At the same time, **high false-positive detection** rates reduce bus driver acceptance of and trust in driving automation systems.

Subject matter experts shared several important examples of these pedestrian-centric situations:
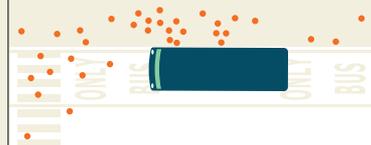
OPERATING IN LARGE CROWDS

DRIVING TOWARD PEDESTRIANS

PASSENGER ACTIVITY AROUND THE BUS

The results of this study may serve as:

1 A baseline against which to compare the results of future system-specific hazard and safety analyses.

2 A reference for manufacturers that wish to pursue different hazard analysis strategies.

The full report can be found at
https://rosap.ntl.bts.gov/view/dot/49126

U.S. Department of Transportation
Volpe Center