

# Connected Vehicles Overview

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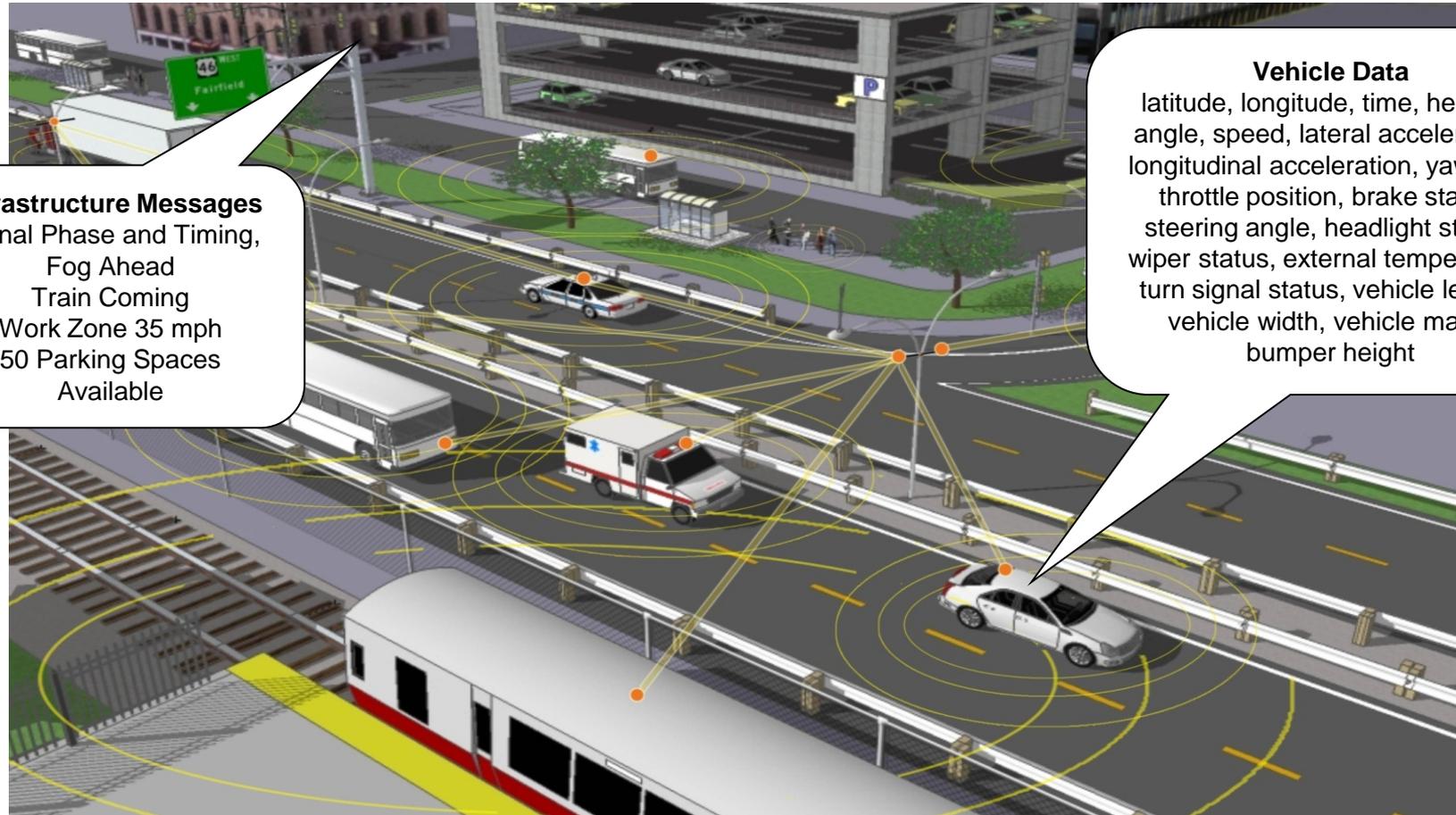


Photo Source: U.S. DOT





# Fully Connected Vehicle



**Infrastructure Messages**  
Signal Phase and Timing,  
Fog Ahead  
Train Coming  
Work Zone 35 mph  
50 Parking Spaces  
Available

**Vehicle Data**  
latitude, longitude, time, heading  
angle, speed, lateral acceleration,  
longitudinal acceleration, yaw rate,  
throttle position, brake status,  
steering angle, headlight status,  
wiper status, external temperature,  
turn signal status, vehicle length,  
vehicle width, vehicle mass,  
bumper height



# Crash Reduction Potential

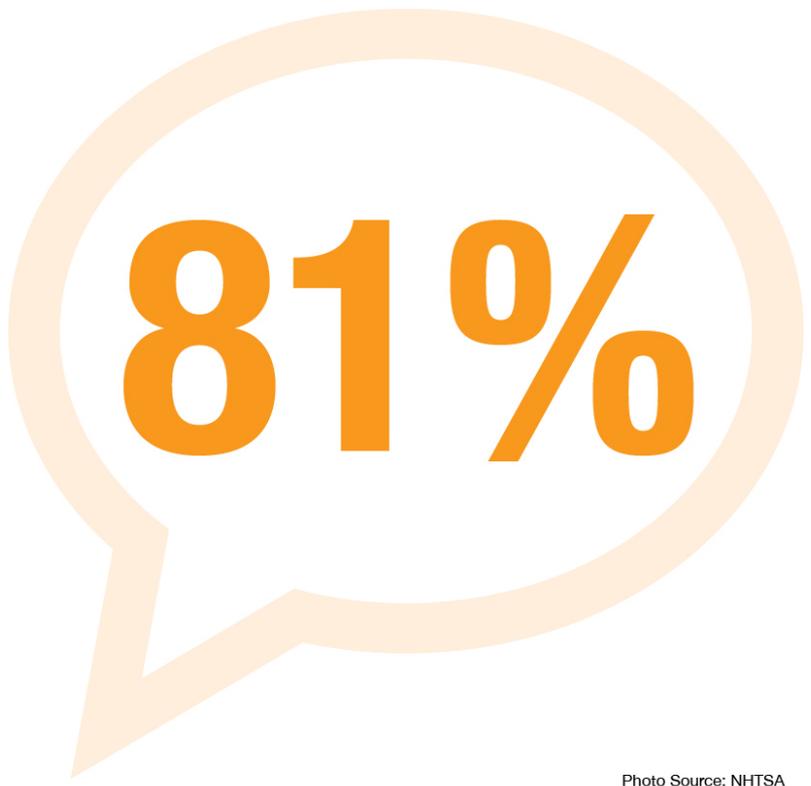


Photo Source: NHTSA



# Connected Vehicle

## Rulemaking to require vehicle-to-vehicle (V2V) communications technology

- Based on data from many sources, including the **Safety Pilot Model Deployment**





# The path toward connected vehicles will ultimately lead to automated vehicles.

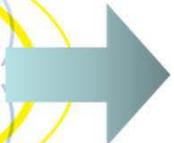
## Connected Vehicle

Communicates with nearby vehicles and infrastructure; Not automated



## Connected Automated Vehicle

Leverages autonomous automated and connected vehicles



## Autonomous Vehicle

Operates in isolation from other vehicles using internal sensors

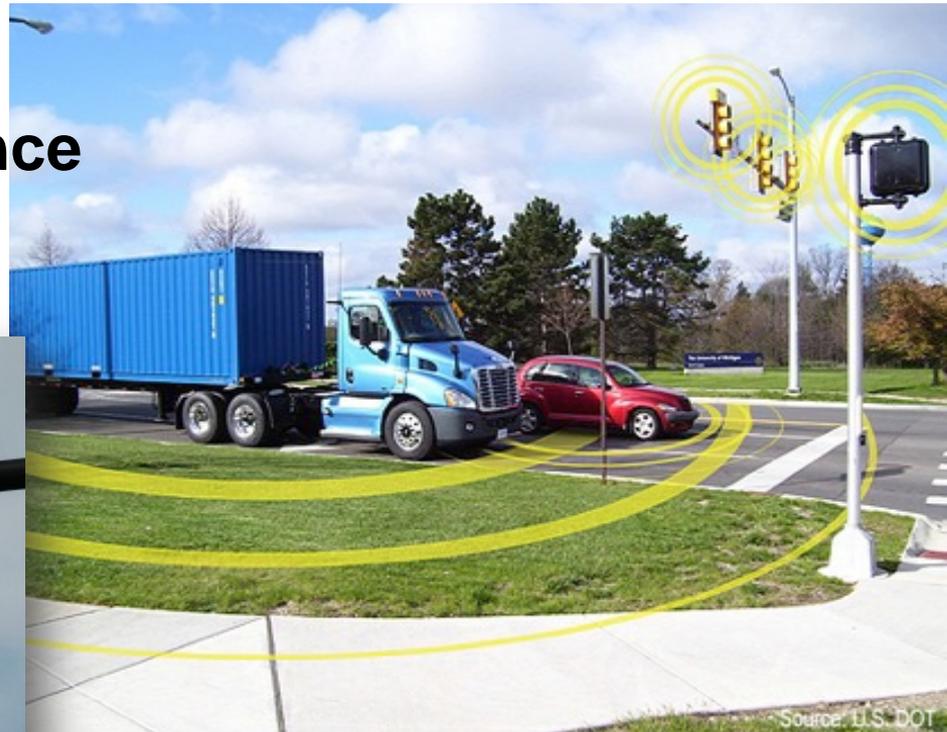




# Infrastructure Deployment Planning

## V2I Deployment Guidance

- FHWA issue in 2015





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