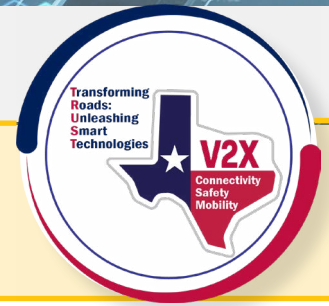


Saving Lives with Connectivity: Accelerating Vehicle to Everything (V2X) Deployment



USE CASE #7 Adverse Weather Events / Flooding

WHAT IS VEHICLE-TO-EVERYTHING (V2X)?

V2X functions like a group chat for the road. It allows cars, traffic lights, and other road users to communicate in real-time by sending messages to each other, and each message can carry different safety and roadway information.



Floodwaters cover rural roadway blocked by a work truck and "Road Closed" barricades. (source TTI)

USE CASE #7 DESCRIPTION

Texans understand the need to stay informed about adverse weather when they are already on the road. This use case enhances driver awareness by sharing hyper-local weather alerts such as flooding and slippery roads from rain or ice. It notifies drivers in real-time and supports faster emergency coordination and access when needed.

WHAT CAN I EXPECT FROM THIS USE CASE?

V2X technology will provide your mobile navigation app with timely, accurate, and reliable information on location-specific weather conditions. Real-time notifications will be delivered only when relevant to the driver's location. These alerts empower drivers to make safer, more informed decisions on the road.

HOW DOES IT WORK?

Weather and roadway condition data are gathered from sources such as roadway sensors, weather services, and traffic management centers. This data is analyzed by a cloud-based platform that evaluates conditions and converts the information into V2X messages delivered to your mobile navigation app.

TEXAS, 2023

OVER 422,000

insured vehicles
processed for
FLOOD-
DAMAGE
by Harvey
in Texas



CRASHES IN RAIN 42,532 STATEWIDE



USER STORY

The Challenge: You are driving along a rural stretch of highway after several days of on-and-off rain. Visibility is limited, and the pavement is starting to look slick, but there are no nearby signs to warn you of changing conditions.

V2X Solution: Weather data is processed and converted to a V2X message. As you approach the affected area, you receive a location-specific alert.

Outcomes & Benefits: You slow down and take extra caution through the area, avoiding a potential crash.

Adverse Weather Events / Flooding

TEXAS TRUST PROJECT

The Transforming Roads: Unleashing Smart Technologies (TRUST) project is a federally funded initiative led by the Texas A&M Transportation Institute (TTI).

TTI, in partnership with state, local, and industry partners, is implementing V2X technology in Houston and Bryan-College Station through 15 real-world use cases that demonstrate how V2X can enhance safety, mobility, efficiency, and economic growth. TRUST aims to develop solutions that work across different technologies and regions, while sharing insights to help create a national blueprint to accelerate V2X adoption and implementation nationwide.

USE CASES

LOCATION:

NATIONAL HIGHWAY SYSTEM

6. Incident Management / Hurricane Evacuation
- 7. Adverse Weather Events / Flooding**
8. Planned Construction and Special Events
9. Curve Speed Warning



LEARN MORE ABOUT TEXAS TRUST & V2X

For more information on Texas TRUST and to explore V2X educational resources, project updates, and use cases, please visit: <https://v2xtexastrust.com/>

For a list of supporting references used in these materials, visit: [V2X Use Case Sources](#).



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