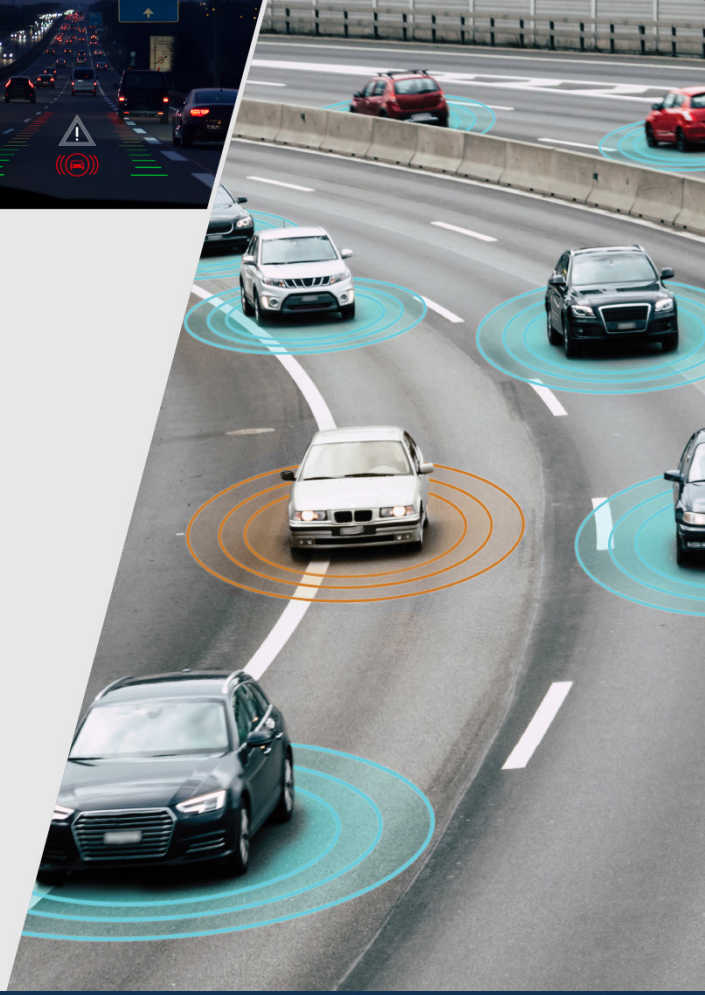
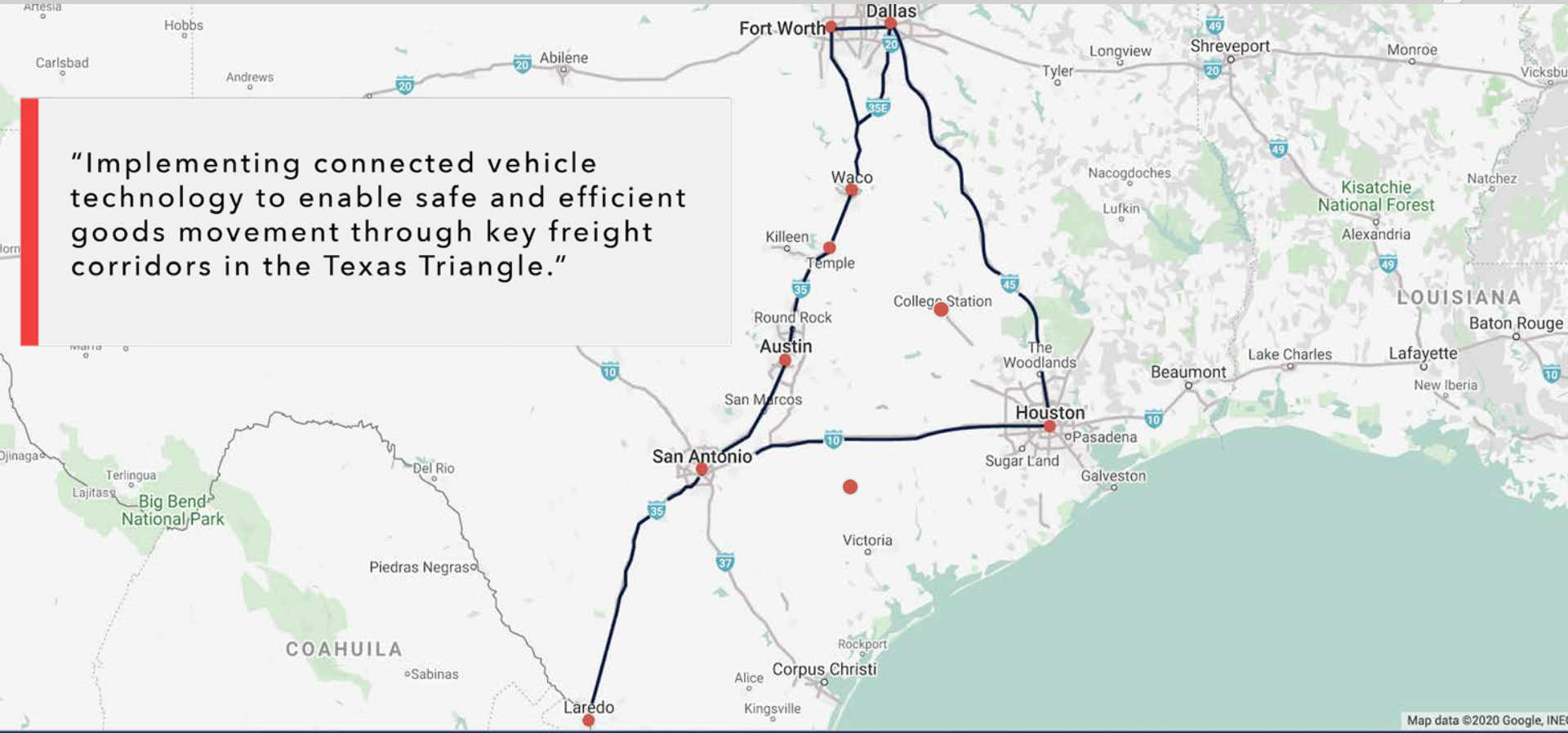
Texas Connected Freight Corridors (TCFC)

TIA Team Lead Meeting



March 17, 2021

Vision



"Implementing connected vehicle technology to enable safe and efficient goods movement through key freight corridors in the Texas Triangle."

Benefits

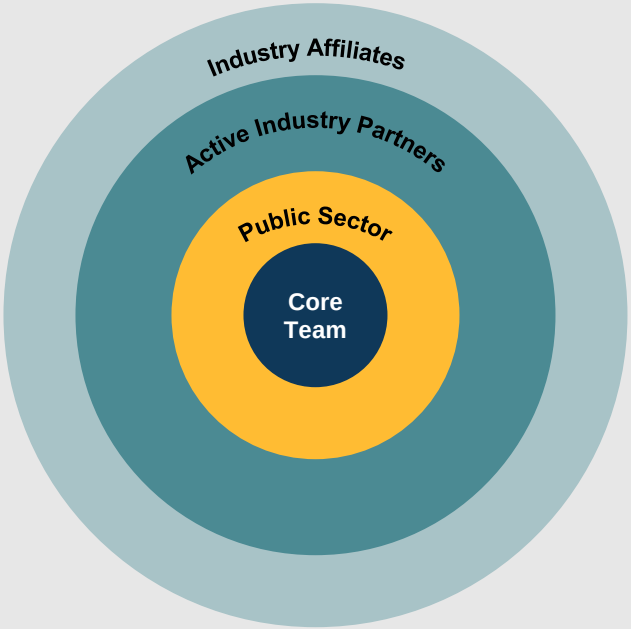
BENEFITS

Gain access to near-real-time information on work zones, traffic queues, alternative travel routes, and wrong-way drivers

Achieve proof of concept before making a large connected vehicle technology investment

Contribute to a model that will set an example for future CV deployments and **develop national standards**

Stakeholders



PRIVATE SECTOR

Active Industry Partners

HEB, Crete Carrier, TuSimple, Kodiak Robotics

Industry Affiliates

Fleets: Coca-Cola, Ford

Telematics: Geotab, Omnitracs, People Net, Drivewyze

Other: Volvo, Peterbilt, Daimler, Texas Trucking Association, AllianceTexas

Overall Project Timeline

PHASE 1

High Level Design and Planning
April 2019 to March 2020

PHASE 2

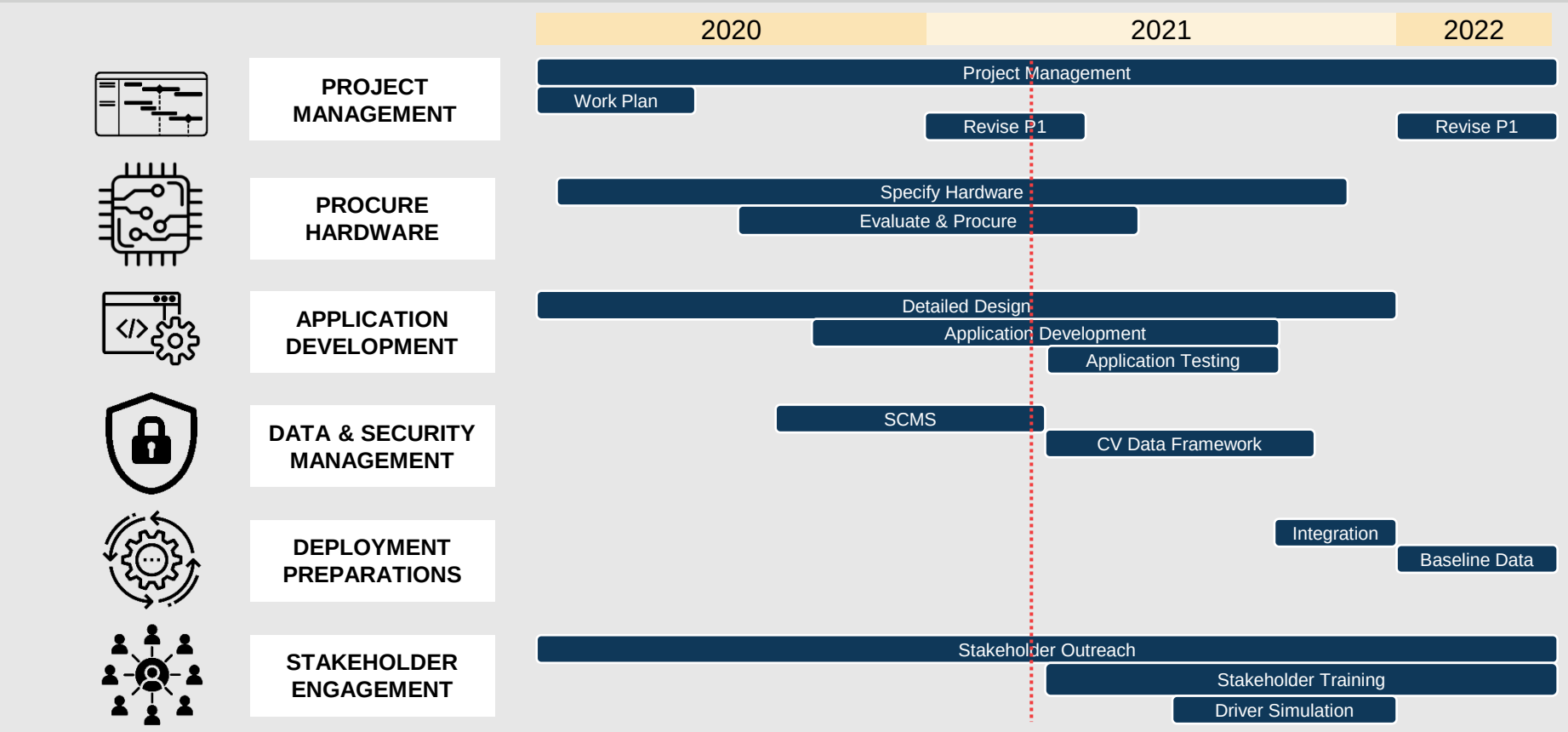
Detailed Design and Testing
April 2020 to March 2022

PHASE 3

Operation and Self- Evaluation
April 2022 to March 2023

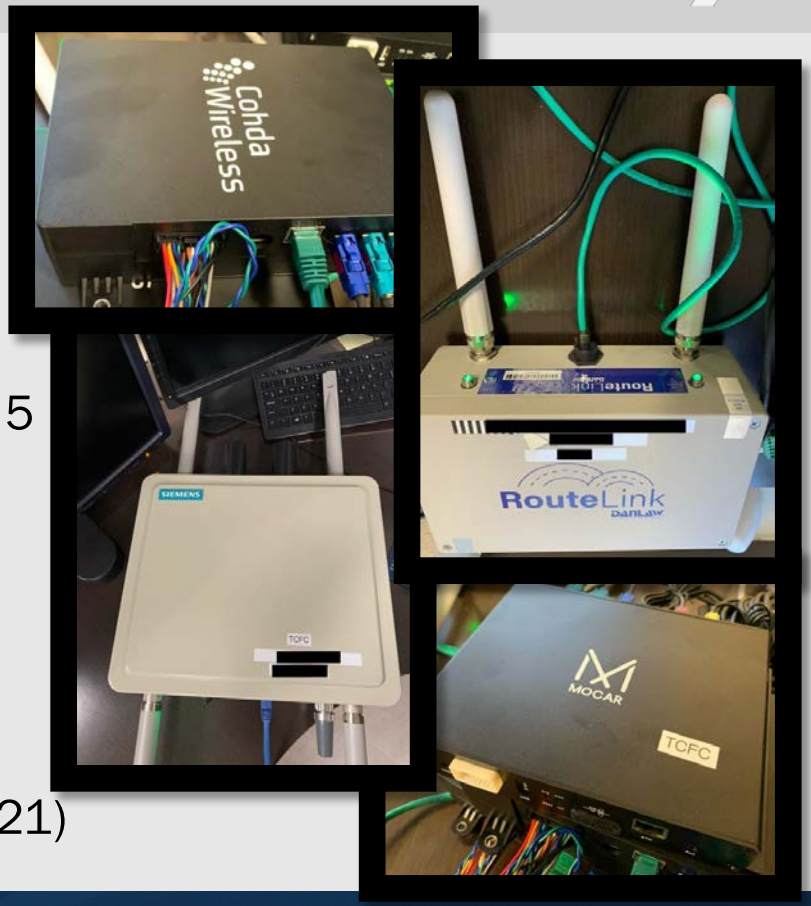
- **APR 2019** Official Project Kickoff
- Concept of Operations (ConOps) meeting
- Prioritized top 6 applications and identified candidate corridors on Triangle Tour
- Deliver Comprehensive Deployment Plan
- **APR 2020** Phase 2 kicks off
- On-board industry partners, complete MOU and EOI
- Test, select, and procure RSUs and OBUs for deployment
- Finalize deployment locations and allot equipment
- Develop 4-6 CV applications
- Conduct system testing and integration
- Acquire baseline data for performance evaluation
- **APR 2022** Phase 3 kicks off
- Deploy technology and monitor operations
- Evaluate performance and report out
- **MARCH 2023** Project concludes

Phase 2 Work Flows



V2X Equipment

- FCC ruling has impacted our approach
  - Focusing on C-V2X equipment
- Received and currently evaluating:
  - Candidate C-V2X OBUs from 4 vendors
  - Candidate C-V2X or dual-mode RSUs from 5 vendors
- Document results in Equipment Evaluation Report
- Present recommendations and procure equipment for deployment (targeting May 2021)



Task 2.7 – Application Development

Candidate Corridor Example

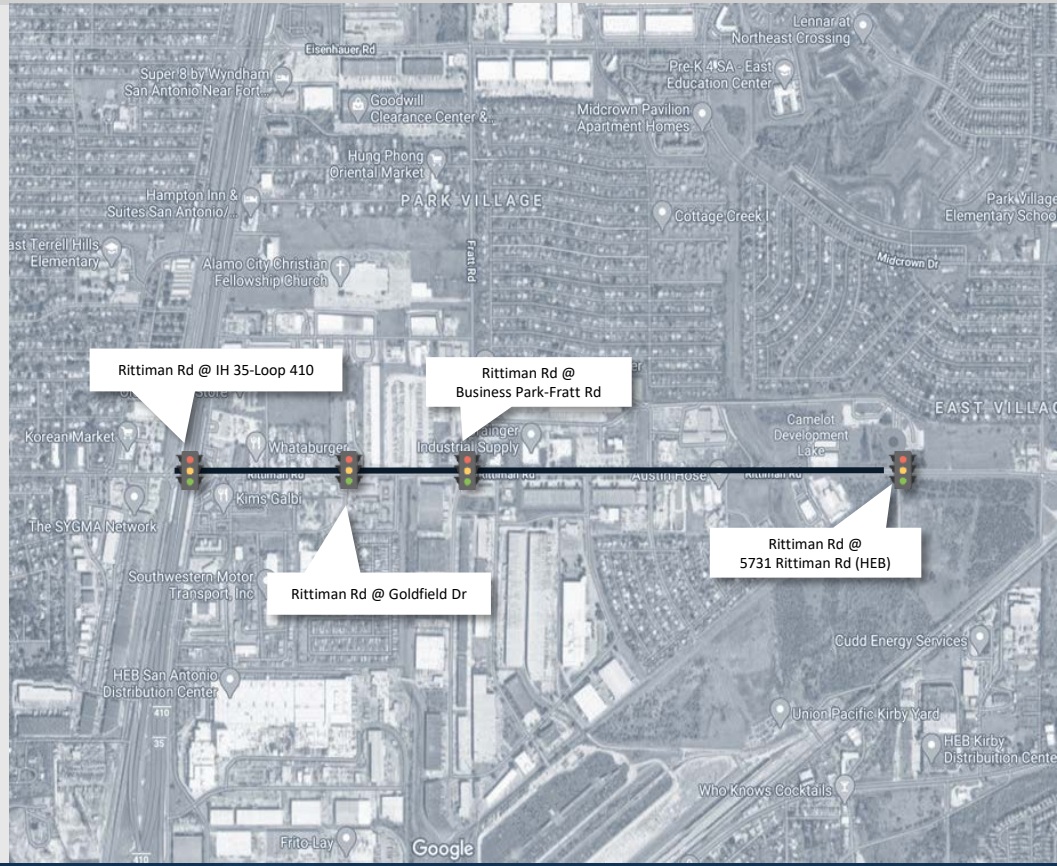
Estimated Truck Traffic: 1235 trips/wk

Applications: QW, FSP

Physical Mounting Locations

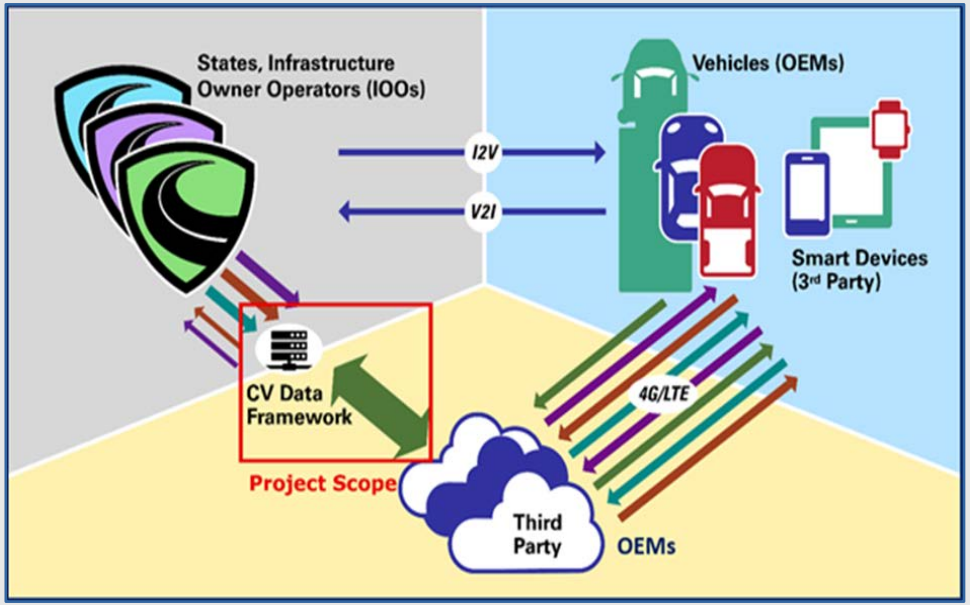
- Traffic signal poles at signalized intersections
- Power: Y
- Network Connection: 4G modem connected to the City's communication network

More Info: Priority request would be considered ever 3 signal cycles



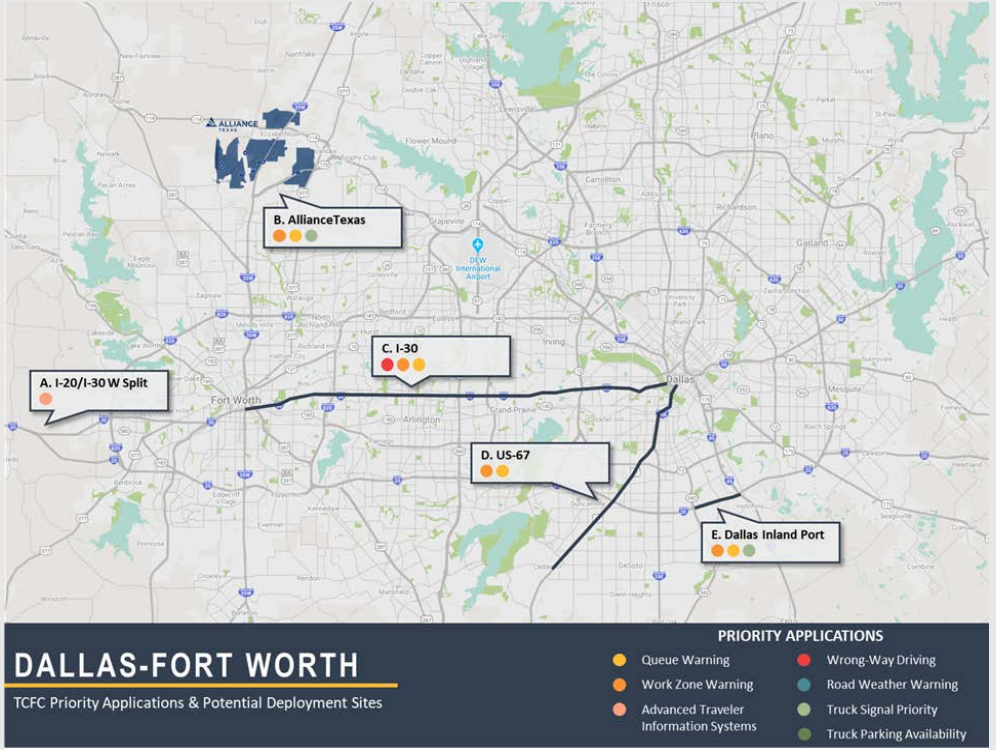
Connected Vehicle Data Framework

- Opportunities for IOOs to consume data from third parties to supplement CV ecosystems
  - Some disparate “data portal” systems existed or were being developed
- CV PFS “Using Third Parties to Deliver I2V”
  - Objective was to outline preliminary set of <u>common</u> interfaces to support bidirectional data flow



I-30 C-V2X Technology Corridor

- Concentrated C-V2X corridor
  - 20 RSUs
- Same prioritized applications
- Seeking additional fleet / OEM stakeholders



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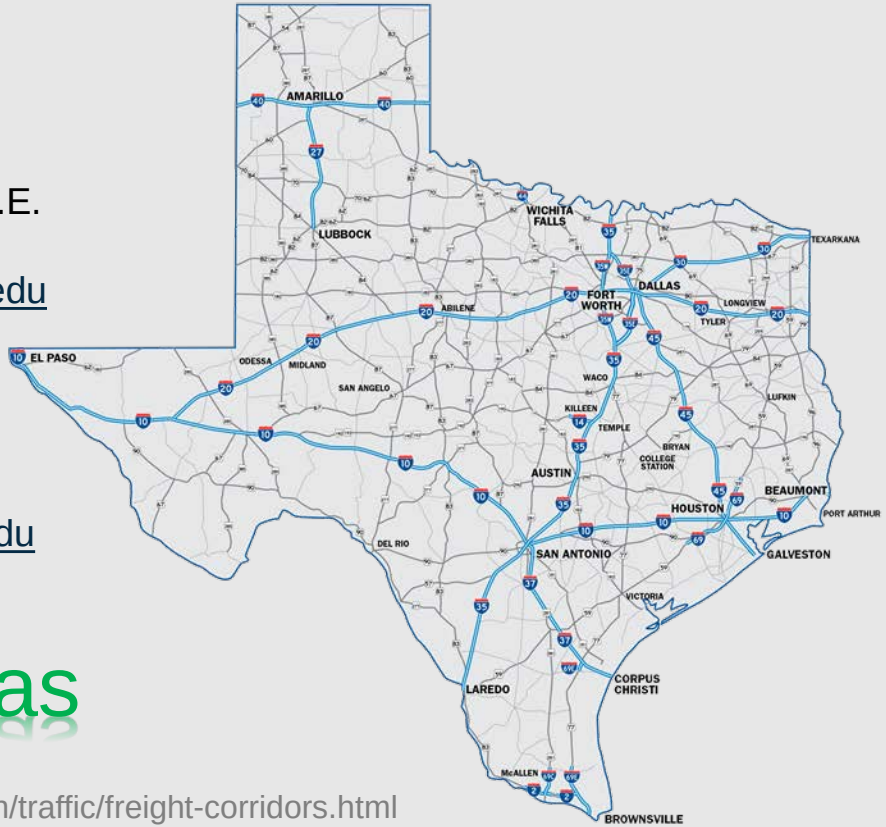

Connecting You With Texas

For more info, please visit https://www.txdot.gov/inside-txdot/division/traffic/freight-corridors.html