

## **Transportation Innovation in Texas**

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### Connected, Virtual, Intelligent Infrastructure / Digital Twins / Data Exchanges & Internet of Things (IoT)





#### **Electric and other Alternatively Fueled Vehicles, Resiliency and the Grid**









#### **Automation all types of platforms**





#### **Innovation Investigation**



#### **Innovation is:**

The implementation of new ideas, devices, or processes that address a problem and create value for the Department and their customers.

...initial emphasis on technology deployments.

#### **Leveraging the TxDOT Incubator and Accelerator**





- Connected and Autonomous Vehicles
- Internal Innovation Discovery and Scale
- Completed Research
- Enterprise Roadway Data
- Electric Vehicles
- Unmanned Aerial Systems
- Broadband Coordination
- Energy Policy / Solar

Final
Ownership
Districts
and
Divisions

#### Near term innovations/Where do we go next?



#### Some common request / issues:

- Data insights and dashboards
- Low water crossing / Flood detection systems
- TMC Help / Traveler information / Signal management
- Infrastructure condition notification
- Pedestrian solutions
- Wrong Way Driving
- Truck Parking
- Over-height Warnings

#### **Next Steps**

- Detailed district interviews to develop new innovations
- Analyze results and see where/what we can help scale



#### **Other efforts**



- Cooperative and Automated Transportation Strategy/Program
- Freight Network Technology Operations Plan
- Innovations portfolio
- Statewide data contract and ongoing data discovery
- Intelligent Infrastructure
- Advanced Traffic Management Center concepts, integration of autonomy and data (connected information)
- Improved freight operations on corridors, parking info, warnings, weigh in motion
- Emerging technologies, connected systems and other advancements along corridors
- Integration of system information with apps, smart work zones
- Data Exchanges
- Digital Twinning concepts
- What is the future of air traffic and drone operations, working with FAA, universities and industry

#### **Innovation Portal**





#### **TxDOT Innovation Portal**

Home

Site content

Recycle bin





# EndTheStreakTX

End the streak of daily deaths on Texas roadways.

Nov. 7, 2000









**TxDOT.gov** (Keyword: #EndTheStreakTX)