



November 21, 2025

# Houston ConnectSmart

*Making Houston More Connected  
and Less Congested*

Brenda Bustillos, Ph.D., P.E.  
ConnectSmart, PM

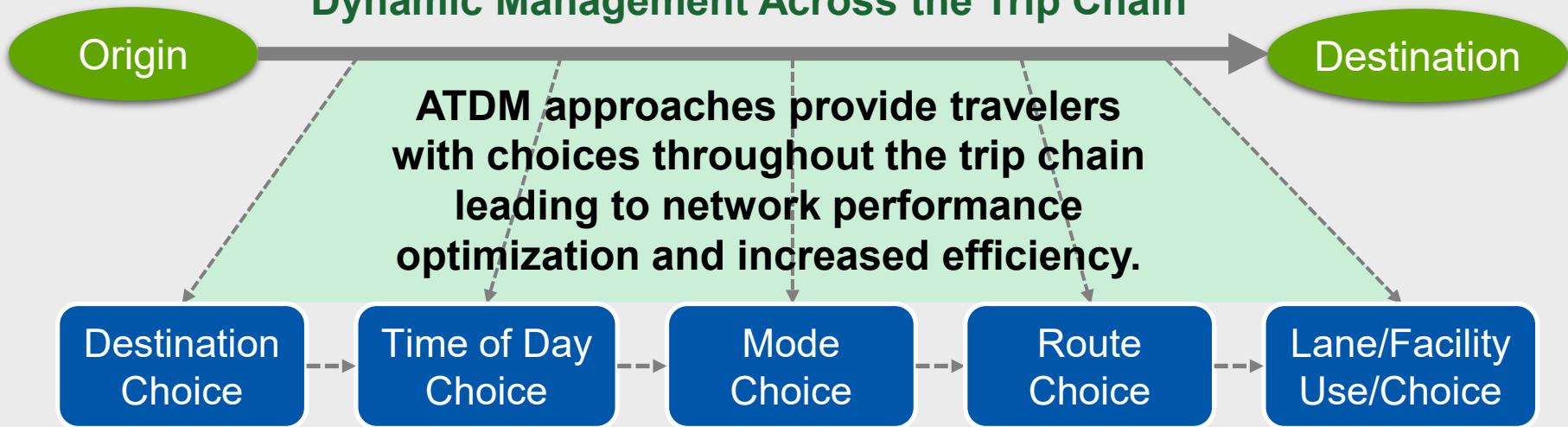
TxDOT Houston District



connect  smart

# Active Transportation and Demand Management (ATDM)

## Dynamic Management Across the Trip Chain



(Source: FHWA)

## Active Demand Management (ADM): Two-Sided Coin

### User-Centric View

- Choices
- Convenience
- Individual Delay
- Price
- Time Sensitivity
- Safety

**Influencing** user decisions  
**to enhance** system operations

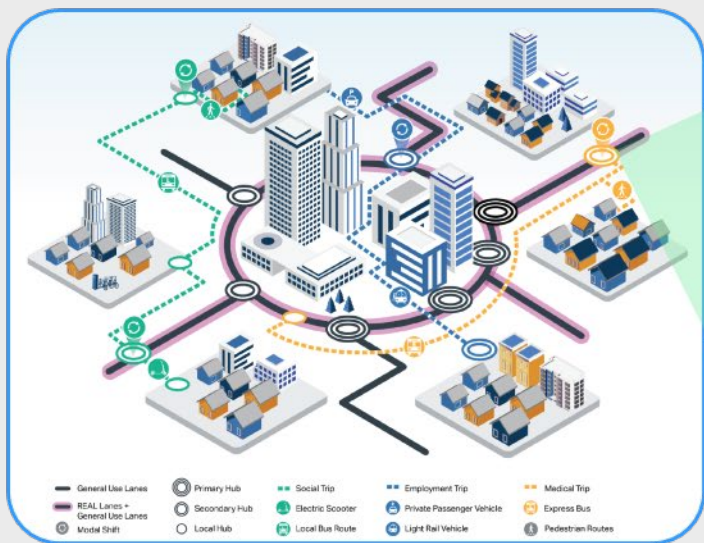


### System-Centric View

- Reliability
- Safety of Travel
- System Resilience
- Overall Delays
- System Efficiency

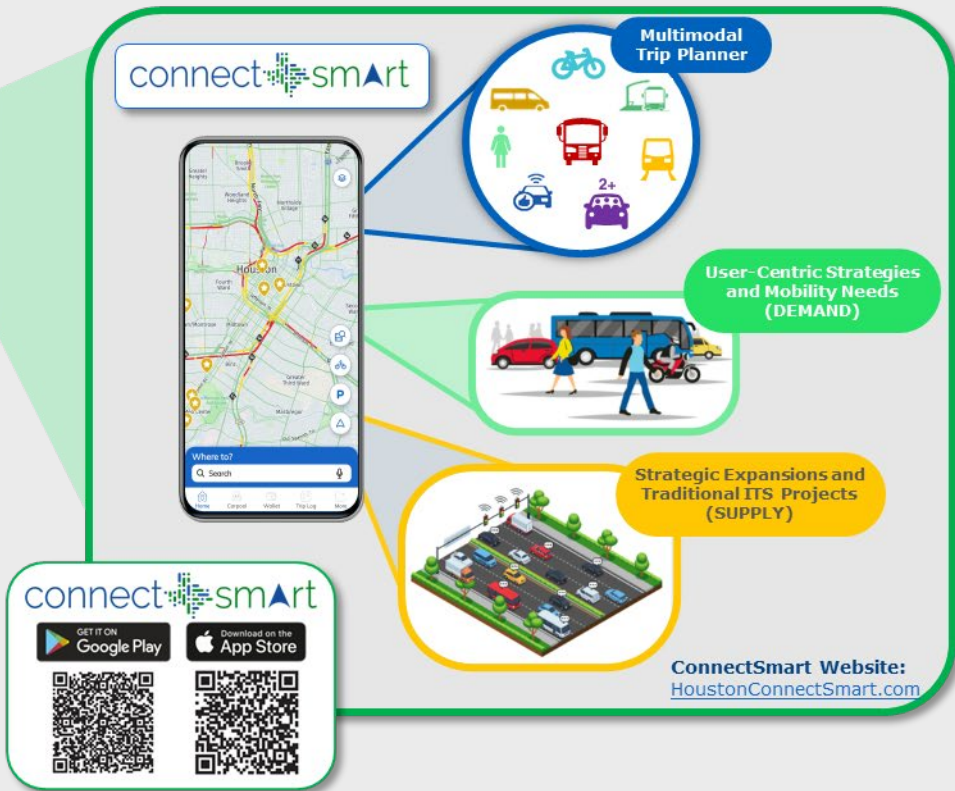
**Enhancing** system operations  
**to influence** user decisions

# ConnectSmart: Solving Transportation Challenges with Innovation



ConnectSmart is the Technology Connecting Users to Transportation Infrastructure and Services

connect:smart



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Multimodal Trip Planner



User-Centric Strategies and Mobility Needs (DEMAND)

Strategic Expansions and Traditional ITS Projects (SUPPLY)

connect:smart

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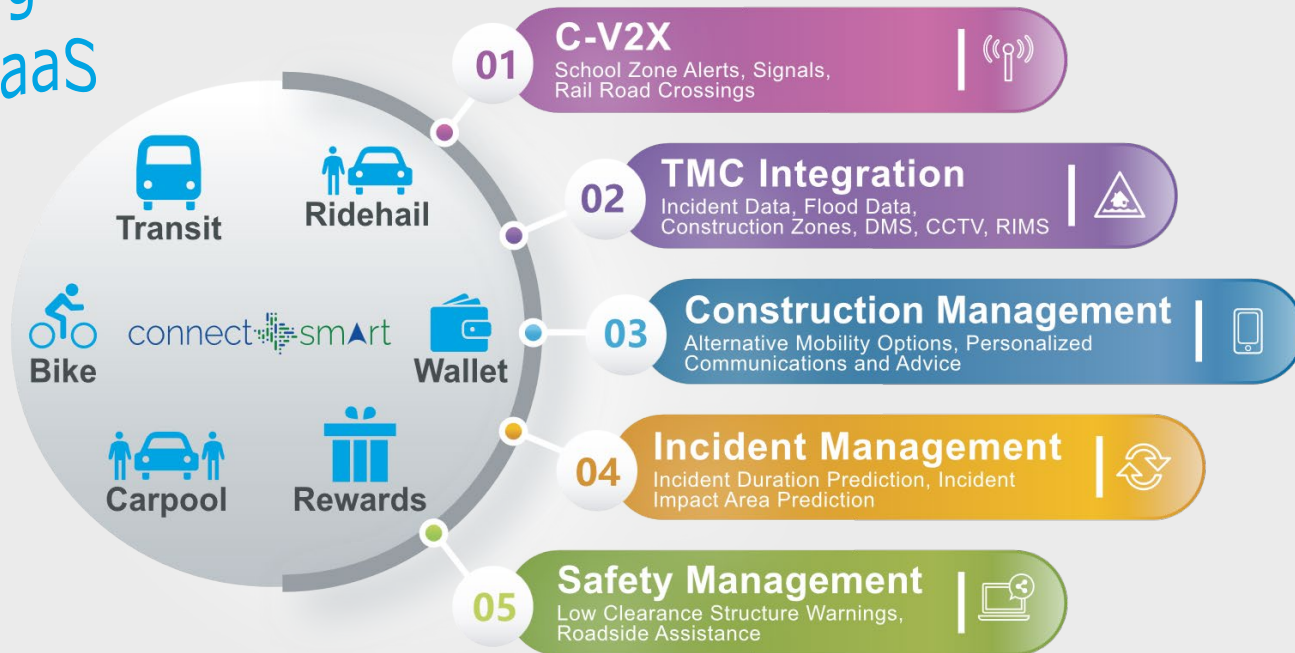
Download on the App Store

ConnectSmart Website: [HoustonConnectSmart.com](http://HoustonConnectSmart.com)

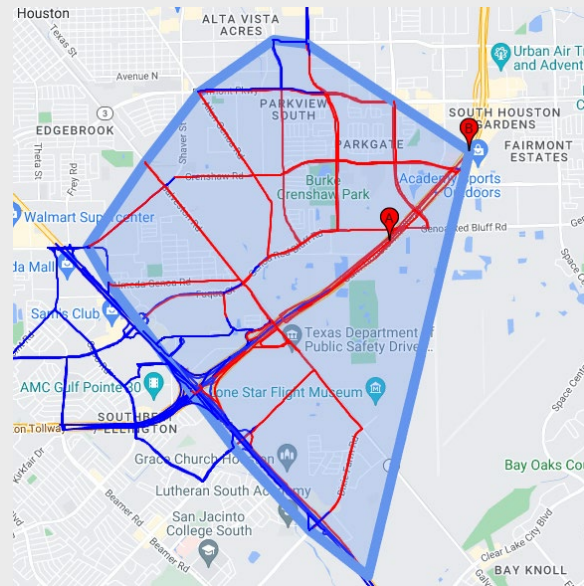
# ConnectSmart: Mobility as a Service and Tool (MaaSAT)

Transcending  
Traditional MaaS



## ConnectSmart Incident Management

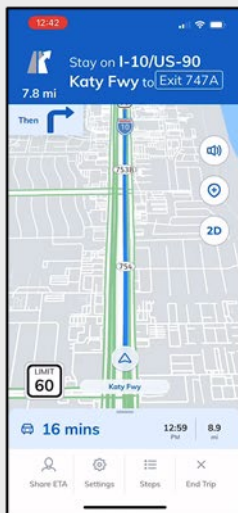
- **Incident Integration:** Receives and updates TranStar's incident data
- **Machine Learning (ML):** Incident duration and impact area prediction
- **Personalized Trips:** Identifies user's trip and provides relevant incident information
- **GenAI:** Personalized messages



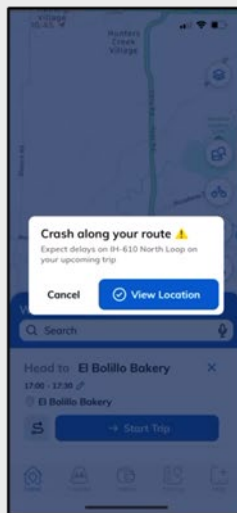
# ConnectSmart's Personalized Roadway Event Notifications



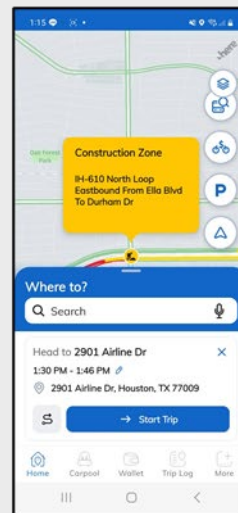
## Advanced DMS



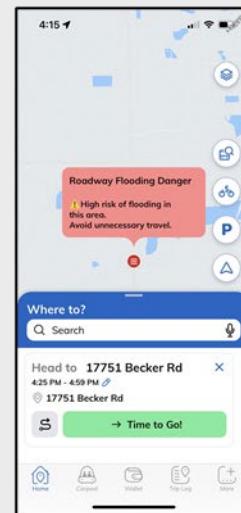
## Incident



## Construction Zone



## Flooding



### Stage 1: Pre-Trip

Push notifications or in-app pop-up messages

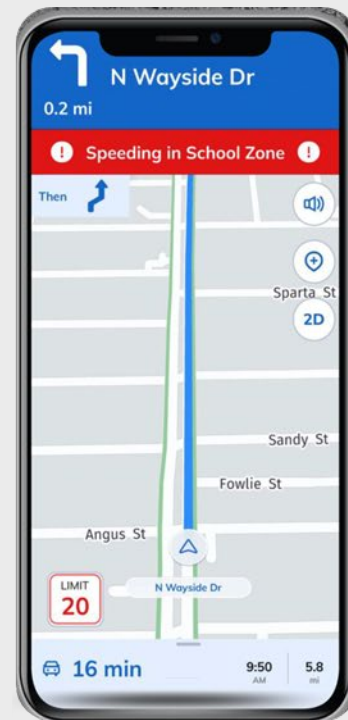
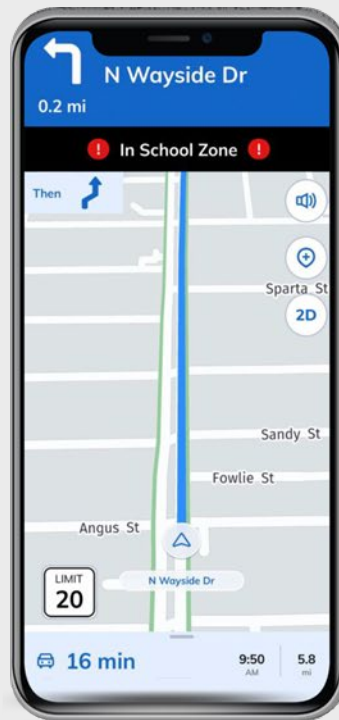
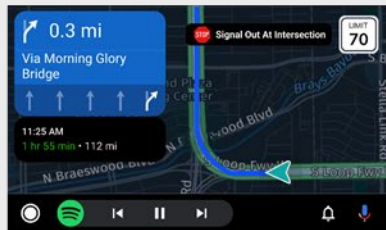
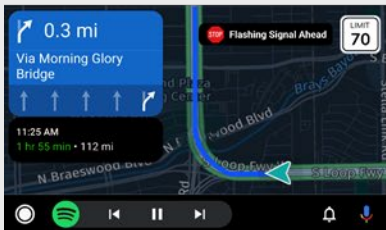
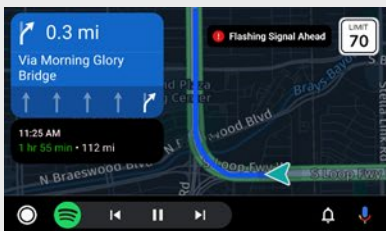
### Stage 2: Trip Planning

System event icon and information along routes

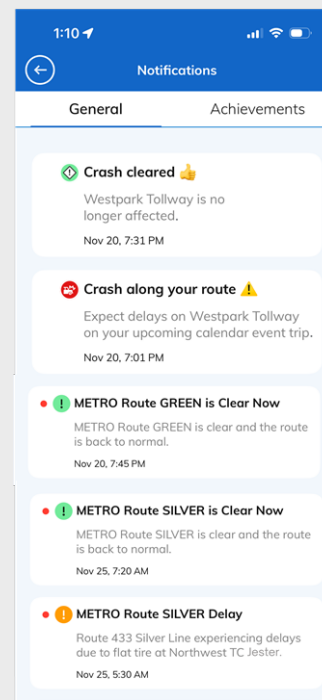
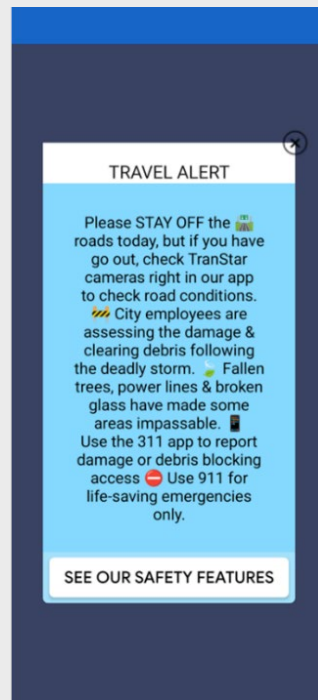
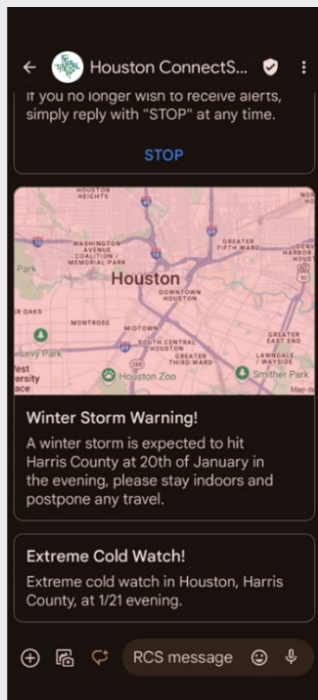
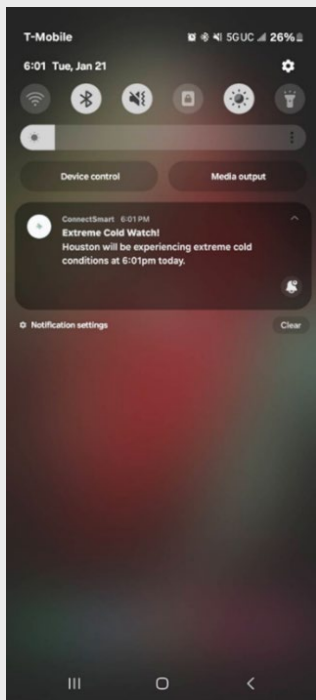
### Stage 3: En-route

En-route alerts for events that impact current trip

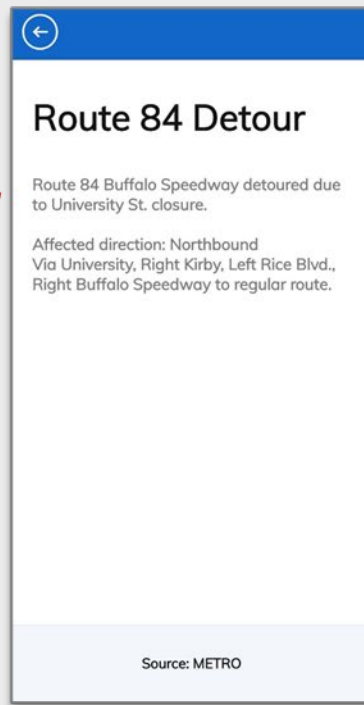
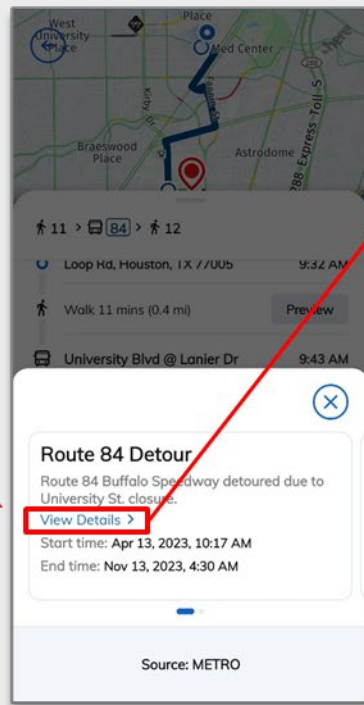
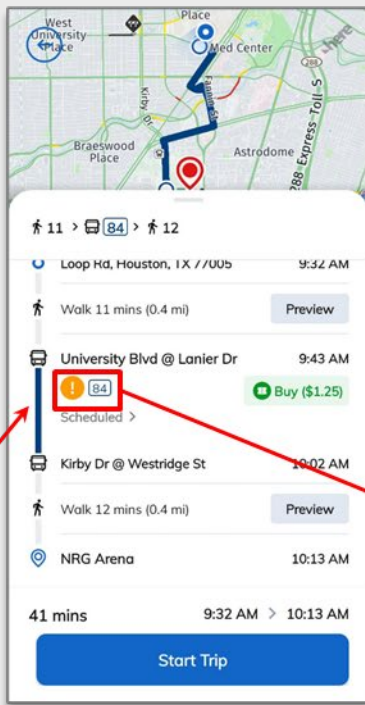
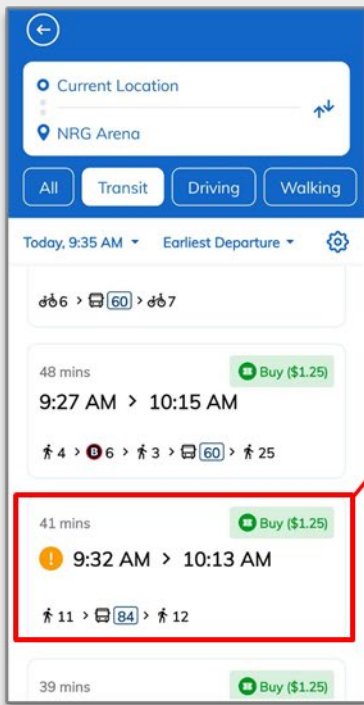
# C-V2X Integration



# Personalized Weather Alerts







# ConnectSmart Personalized Transit Alerts



# ConnectSmart Pillars, Features, and Integrations



Pillars	Features
 <b>Connecting Houston</b>	<ul style="list-style-type: none"> <li>- Carplay/Android Auto integration</li> <li>- Multimodal &amp; Intermodal trip planning and navigation</li> <li>- Personalized travel options</li> <li>- Rideshare provider payments</li> <li>- Instant, social, and employer-based carpools</li> <li>- HOV/HOT routing</li> <li>- Telework</li> <li>- Rideshare integration</li> <li>- Transit timetables</li> <li>- Enhanced point of interest search function</li> <li>- 3rd-party navigation engines</li> </ul>
 <b>System Efficiency</b>	<ul style="list-style-type: none"> <li>- Multimodal dynamic navigation</li> <li>- Traffic cameras</li> <li>- Dynamic message signs (DMS)</li> <li>- Advanced DMS notification</li> <li>- Real-time on-street parking availability</li> <li>- Real-time off-street parking availability/pricing</li> <li>- Airport parking availability and pricing</li> <li>- Predictive analytics for unplanned events</li> <li>- Pre-trip incident alert</li> <li>- Unified weather and construction alerts</li> </ul>
 <b>Safety</b>	<ul style="list-style-type: none"> <li>- Bike comfort routing</li> <li>- Regional Tow and Go™ roadside assistance</li> <li>- Flood risk areas</li> <li>- Low clearance structure trip warnings</li> <li>- School zone warnings and speed alerts</li> <li>- En-route alerts</li> <li>- Pre-trip flood warning alerts</li> <li>- Transit alerts</li> <li>- Uber integration</li> </ul>
 <b>User Engagement</b>	<ul style="list-style-type: none"> <li>- Sober Ride Home campaigns</li> <li>- Regional travel demand (TDM) program</li> <li>- Travel and marketing campaigns</li> <li>- Partner, public, and employer events</li> <li>- Gamification</li> <li>- #EndTheStreakTX press briefing</li> <li>- Spanish and Vietnamese app translation</li> <li>- Challenges and Loyalty program</li> <li>- Mobile app public launch event</li> </ul>

**Regional Partners:**



## For More Information

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