

Video Based Vehicular Safety and Asset Management System for Corpus Christi Water



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Video Based Safety System



- Video-based safety and vehicle tracking system for 318 vehicles operated by Corpus Christi Water (CCW) commonly used on the road
- System provides real-time visibility into safety and operational practices of drivers and equipment
- Data assists in documenting unsafe driving behavior and will help CCW supervisors correct unsafe driving habits
- Samsara is already being used by the Corpus Christi Solid Waste Department and other Texas municipalities

In Use Across Texas

Entity	Number of Units
City of Corpus Christi – Solid Waste Department	120
Port of Corpus Christi	140
San Antonio – Solid Waste Department	550
City of Austin	250
City of Grand Prairie	1,200
City of Arlington	500
City of Garland	140
City of Lewisville	250
City of Frisco	400
City of Abilene	550
City of El Paso	800
El Paso Water	250

How Does It Work?

- Cameras facing forward towards the road and in-cab cameras facing staff record drivers
- A.I. technology senses unsafe driving practices
- Correction is audibly given to driver
- Incidents / events are reported to supervisors within minutes for review and improvement coaching



Pilot Program

- January 2024 to April 2024
- 27,803 miles driven, 1,237 hours logged
- 12 vehicles selected, providing full representation of vehicle types and uses within CCW
- Users included first responders, water quality teams, and meter maintenance teams
- All operators were informed of the equipment installed in their assigned vehicle



Findings

Categories included	Safety events included	% Total of events
Distracted Driving	Inattentive driving (use of mobile device)	63%
Violations	No seatbelt	27%
Collision Risk	Following distance	9%
Traffic Signs & Signals	Rolling stop	1%
Harsh Driving	Harsh brake, harsh turn, crash	<1%

- After incident coaching by supervisors:
 - Harsh driving events such as sudden turning, braking, and accelerating rates decreased by 68%
 - Collision risks primarily characterized by following distance decreased by 91%
 - Distracted driving decreased by 32%

Program Benefits

- SAFETY
 - For drivers – improvements through correction and supervisor coaching
 - For community – safer drivers improve safety for the public
 - For City – protection against insurance scams
- ASSET PROTECTION
 - System can alert not only to driver issues but vehicle issues as well, resulting in improved proactive vehicle maintenance
- INFORMATION
 - A.I. technology, data, and visual record of drivers
 - Other data gathered includes idling time and utilization time allowing the most efficient use of vehicles



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Thank you!