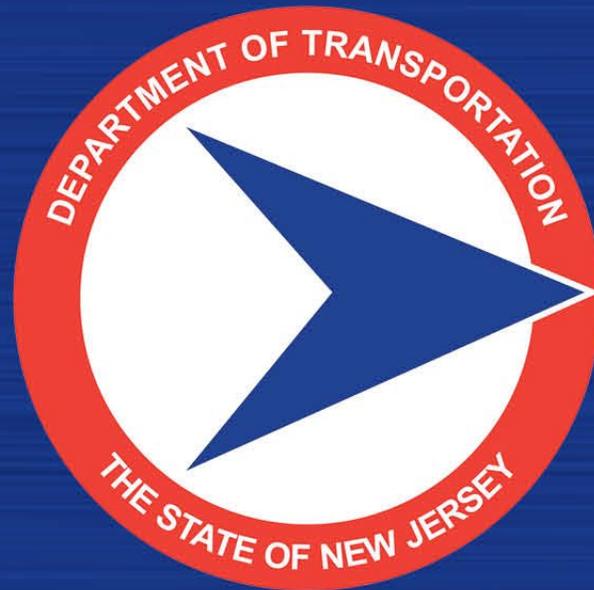
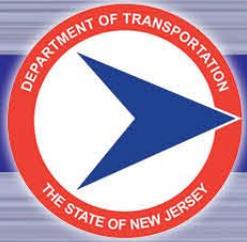


CIA Team Updates: Mobility/OPS



Presented by Konstantinos Kyros
April 30, 2025

NEW JERSEY DEPARTMENT OF TRANSPORTATION



EXPANSION OF WEATHER-SAVVY- COMPLETE!

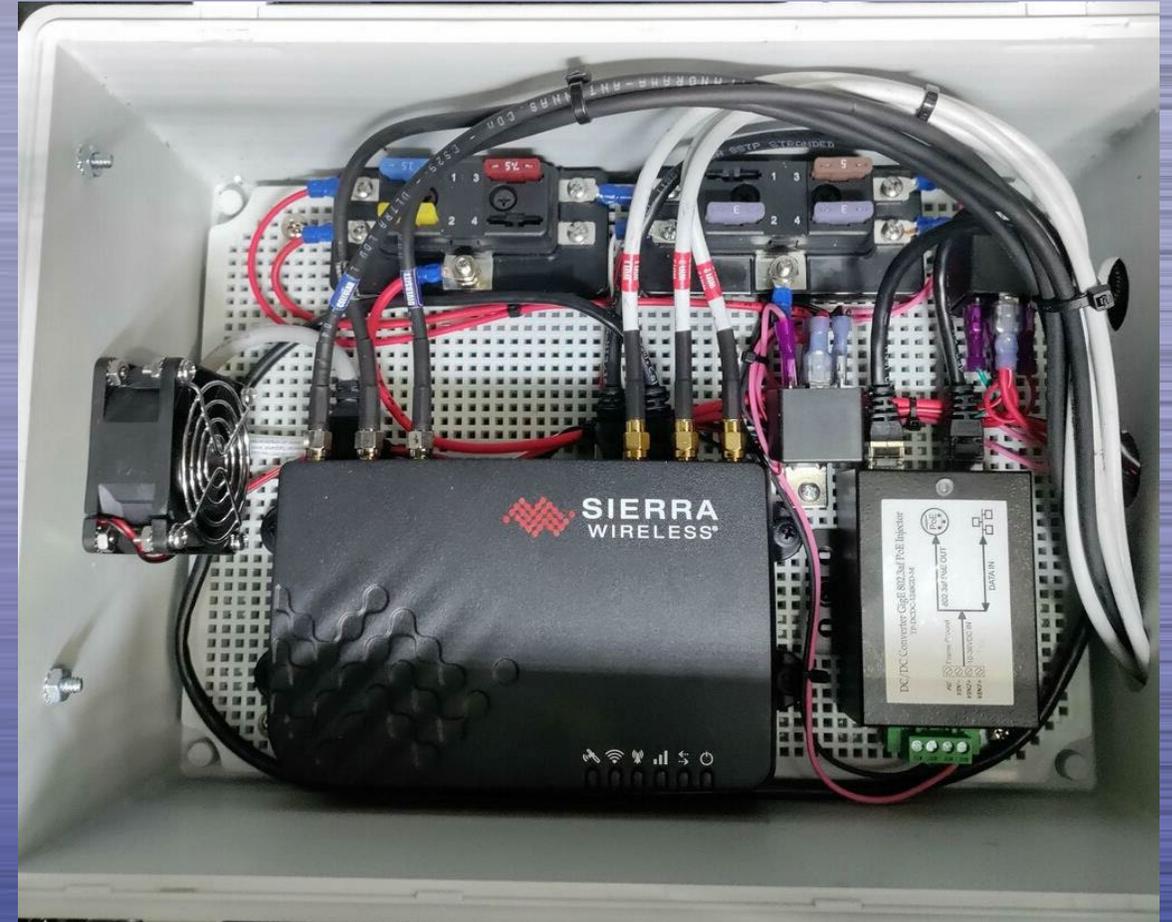
- Installations started in December 2023
- Expanded from 24 to 45 vehicles, (one currently out of service).
- Increased the focus on plows- during a weather event these trucks stay on the road.

Mobility		
North	South	
2 IMRT	1 IMRT	
3 SSP	3 SSP	
Operations		
North	Central	South
7 Plows	8 Plows	10 Plows
6 Pickups	2 Pickups	2 Pickups



WEATHER-SAVVY IMPROVEMENTS

- Previously components were installed on the floor of the cab under the seats.
- Components were susceptible to damage from water, dirt, misc. items in the cab and tampering.
- Now components are installed in a junction box with a plexiglass lid.

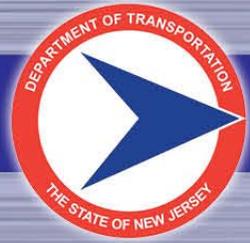




TRUCK PARKING PILOT

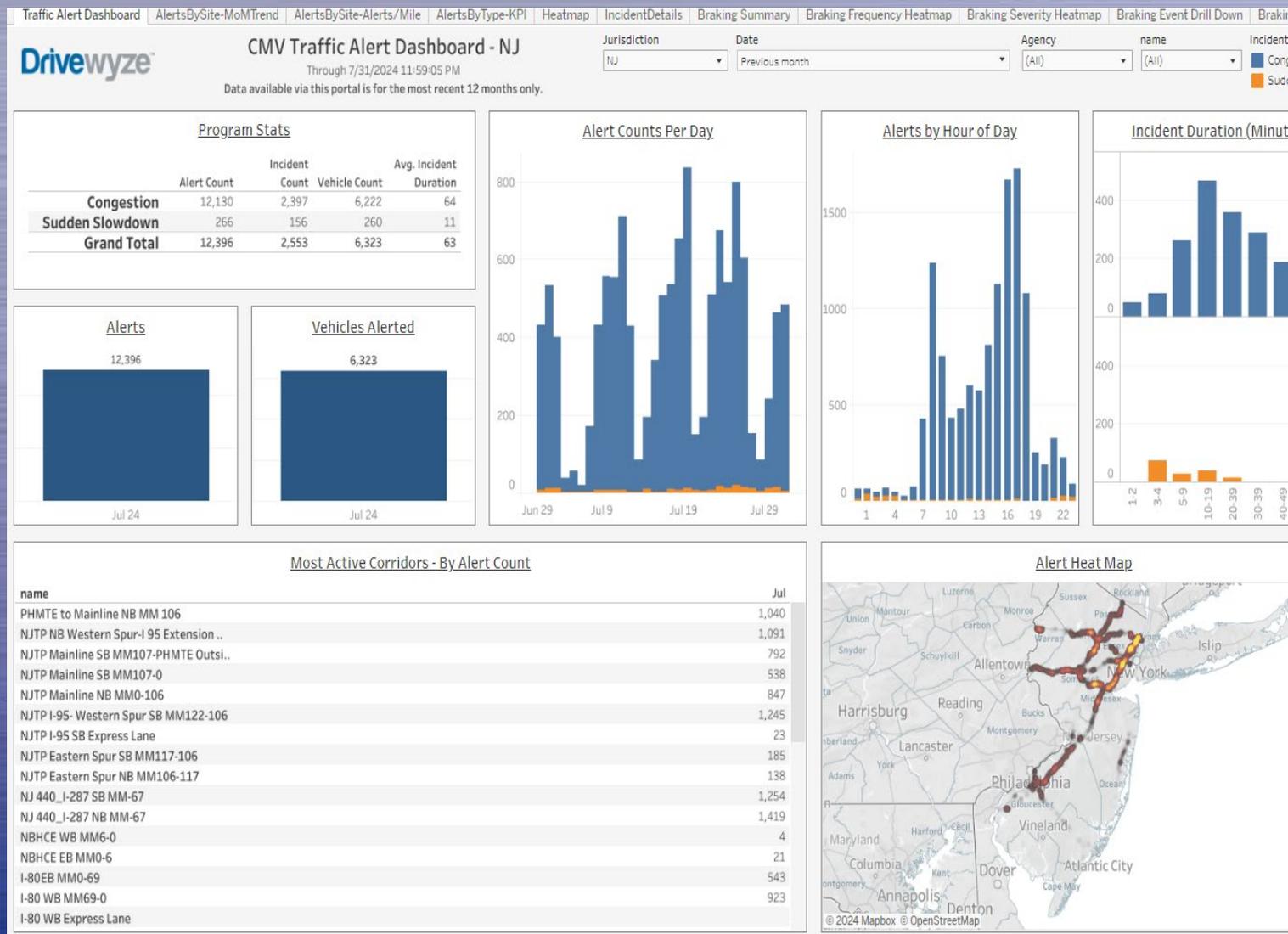
- Started in 2021 at Harding
- Expanded to Carney's Point in the summer of 2023.
- Data gathered from cameras, remote traffic microwave sensors, and in-pavement micro radar sensors (a.k.a., Pucks) is visible on the web portal.
- Next Steps:
 - Install a portable DMS signs approx. 5 miles from Harding on I-287 and I-78 to alert truckers to the number of available spots
 - Currently, in the process of installing at Knowlton

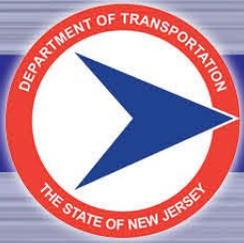




DRIVEWYZE ALERTS

- Provides free safety alerts to commercial vehicle drivers
- Alerts show up directly on the driver's Electronic Logging Device (ELD)
- We can view when and where alerts were sent through the Tableau dashboard
- However, we wanted to verify the accuracy of the alerts





OBJECTIVES & METHODOLOGY



Alert Accuracy

The objective was to verify if Drivewyze accurately identified known static alert locations, ensuring drivers receive timely notifications.



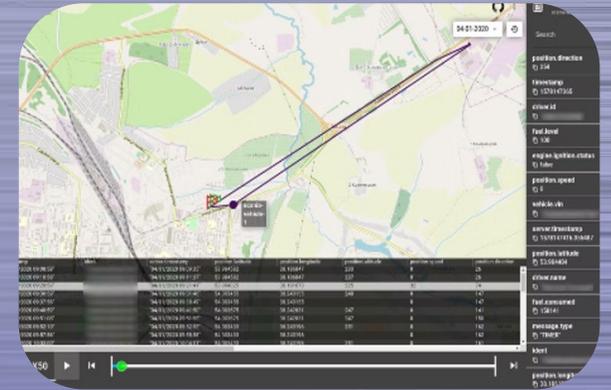
Real-time Environment

The system's ability to detect real-time environmental alerts, such as congestion and standstill traffic, was assessed.



Testing Hours

Four days of testing were conducted during AM Peak Rush hours, between 6 AM and 10 AM, to capture the most challenging traffic conditions.



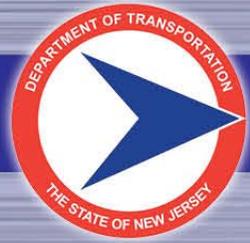
Data Collection

GPS logging applications were used alongside Drivewyze to record precise location data and real-time traffic conditions



STREETLIGHT

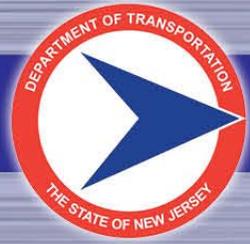
- Streetlight InSight is a data web platform that harnesses connected devices and IoT data to measure vehicles, transit, bike, and foot traffic virtually anywhere.
- What can streetlight do:
 - Create analysis
 - Deliver metrics from browser
 - All roads in NJ are accessible
 - Can choose analytic types



VAISALA GROUNDCAST

- New generation of Weather Sensors.
- GroundCast is self- powered.
- Wireless, no cables or powering required with built-in wireless communication and battery.
- GroundCast measures road surface temperature and the amount of residual treatment material providing you with reference grade observations and location- specific forecasts.





NEW JERSEY DEPLOYMENT

- For the initial pilot deployment, several critical locations have been identified where Vaisala GroundCast sensors are so far installed and will be installed:
 - NJ 29 MP 0.5 (two sensors installed)
 - NJ 12 MP 1.5 (1 sensor installed)
- We are in the process of finalizing a location for installing the third GroundCast sensor