Widely Distributed Sensor Data Paired with Crash Events

CAMBRIDGE MOBILE TELEMATICS

Prevent Serious Injury and Fatal Crashes Before They Occur

1. Understand the contribution of a specific risk event to crashes
2. Assess risk event prevalence across time and space
3. Evaluate changes in risk event due to action

CMT's Mission: Make The World's Roads and Driver Safer

41M
drivers

120
Global programs

83%
coverage of US vehicles

Our partners include Insures, public sector agencies, universities, and nonprofits

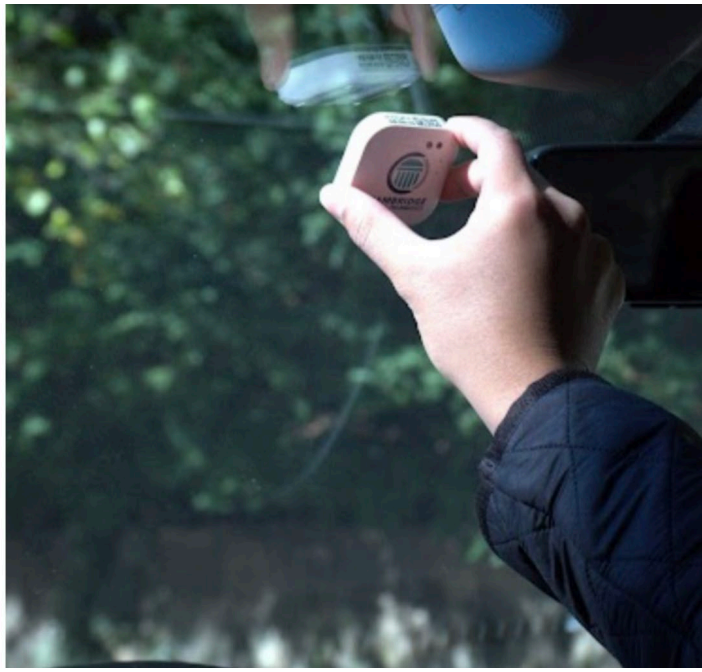
Stanford University · Johns Hopkins University · Penn · Howard University · MIT Massachusetts Institute of Technology · State of Ohio Department of Transportation · MoDOT · WA Traffic Safety Commission · GDOT · OTS California Office of Traffic Safety · AARP · The Kiefer Foundation · StopDistractions.org · Oklahoma Highway Safety

Leading transportation, safety, and auto insurance companies

Uber · verizon · State Farm · DoorDash · Volvo · Hyundai · Progressive

Tag

- Combines Phone and Tag sensors
- Records only in tagged vehicle
- Records events with no phone
- Vehicle mileage estimates
- Gyroscope
- Accelerometer



Phone – ½ of CMT's Data Set

Powerful sensors, automatic driving detection

Accelerometer
Identifies phone position with axis-based motion sensing.

Gyroscope
Works with accelerometer to determine position of phone.

Magnetometer
Measures magnetic fields.

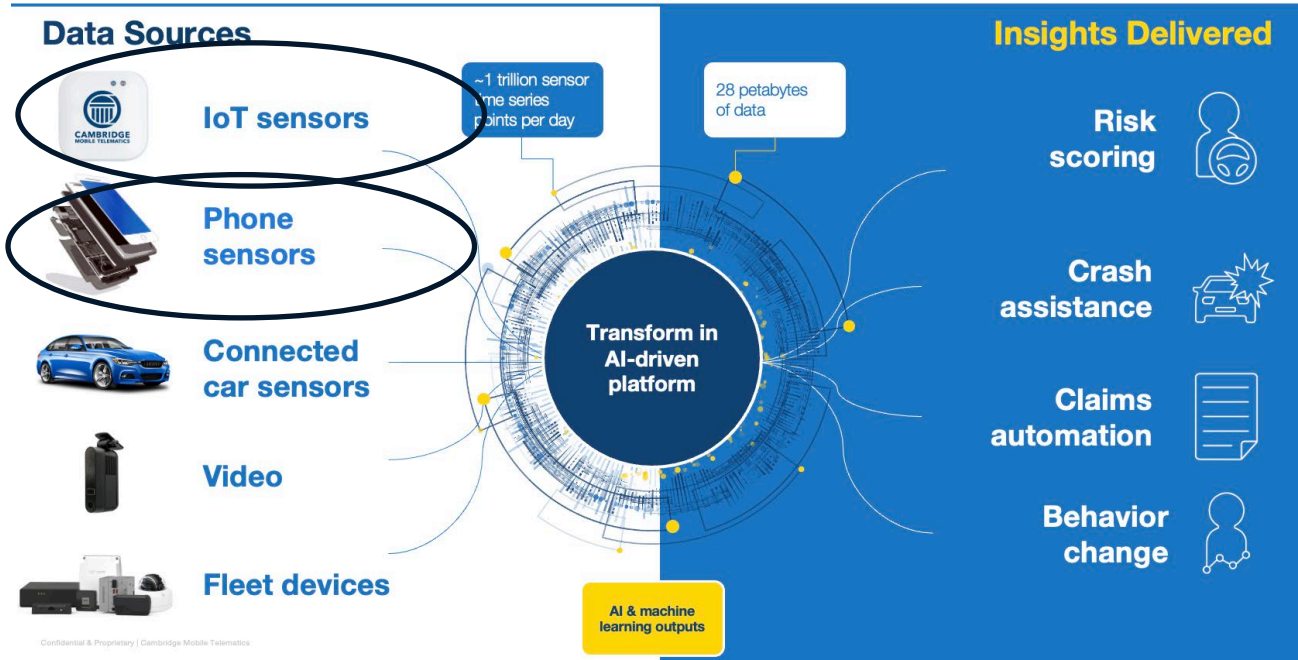
GPS
Identifies phone location with multiple satellites.

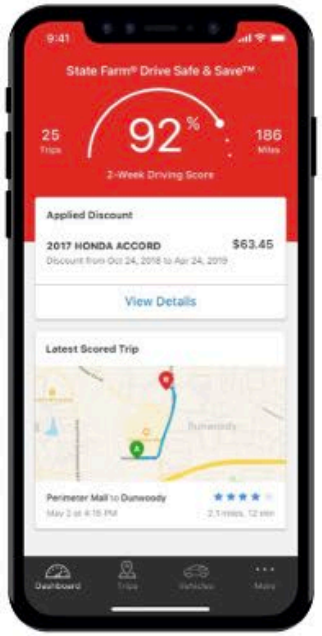
Barometer
Measures air pressure.

Proximity sensor
Determines the proximity of the phone to nearby objects.

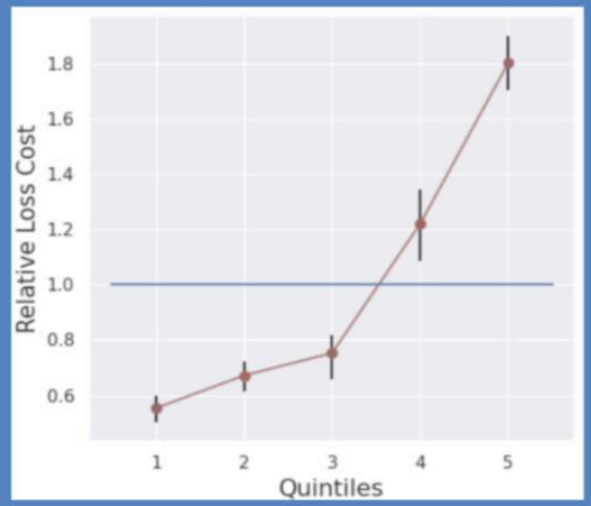
Ambient Light
Measures the amount of light near the phone.

CMT's DriveWell® Fusion Platform



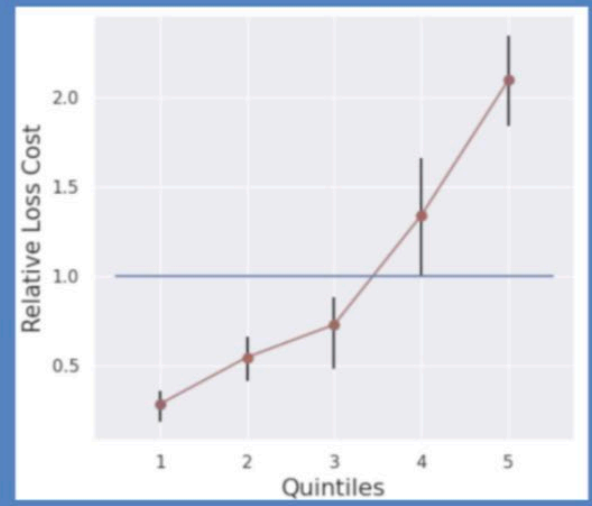


Total Loss Cost

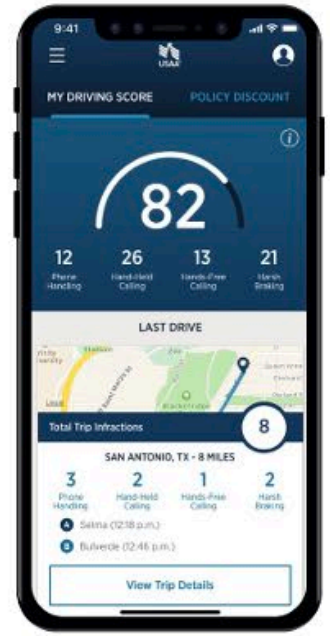


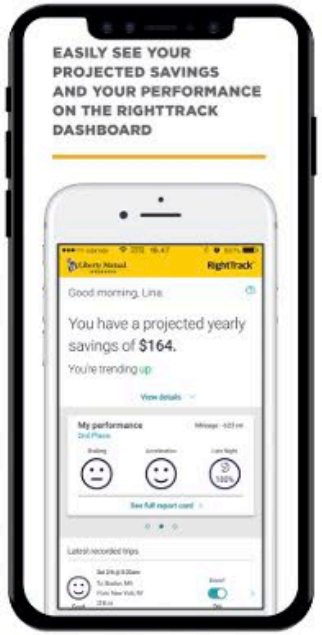
Mean Lift
3.27 [2.93-3.64
Quartile Range]
Decile Mean Lift:4.28

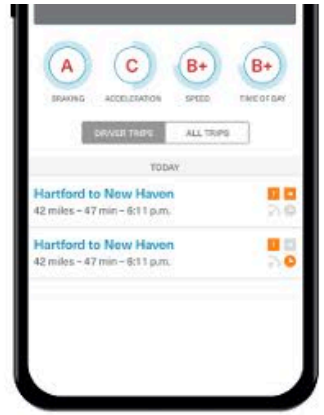
Total Bodily Injury Loss Cost

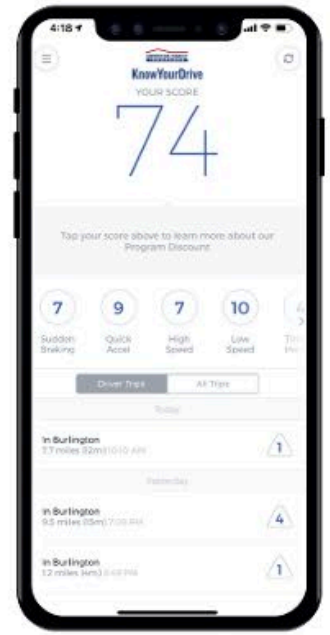


Mean Lift
7.92 [5.65-11.2
Quartile Range]
Decile Mean Lift:16.6





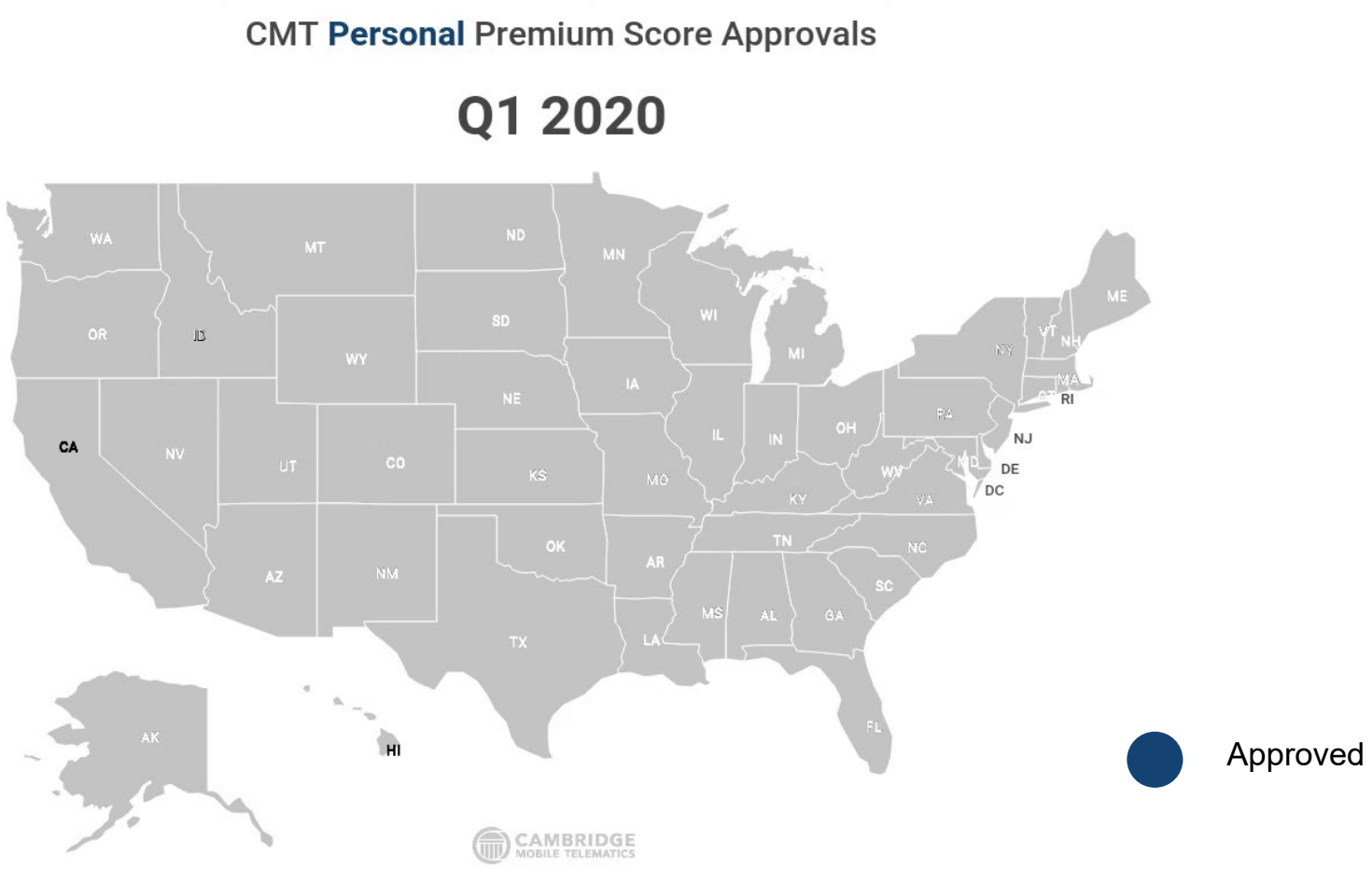




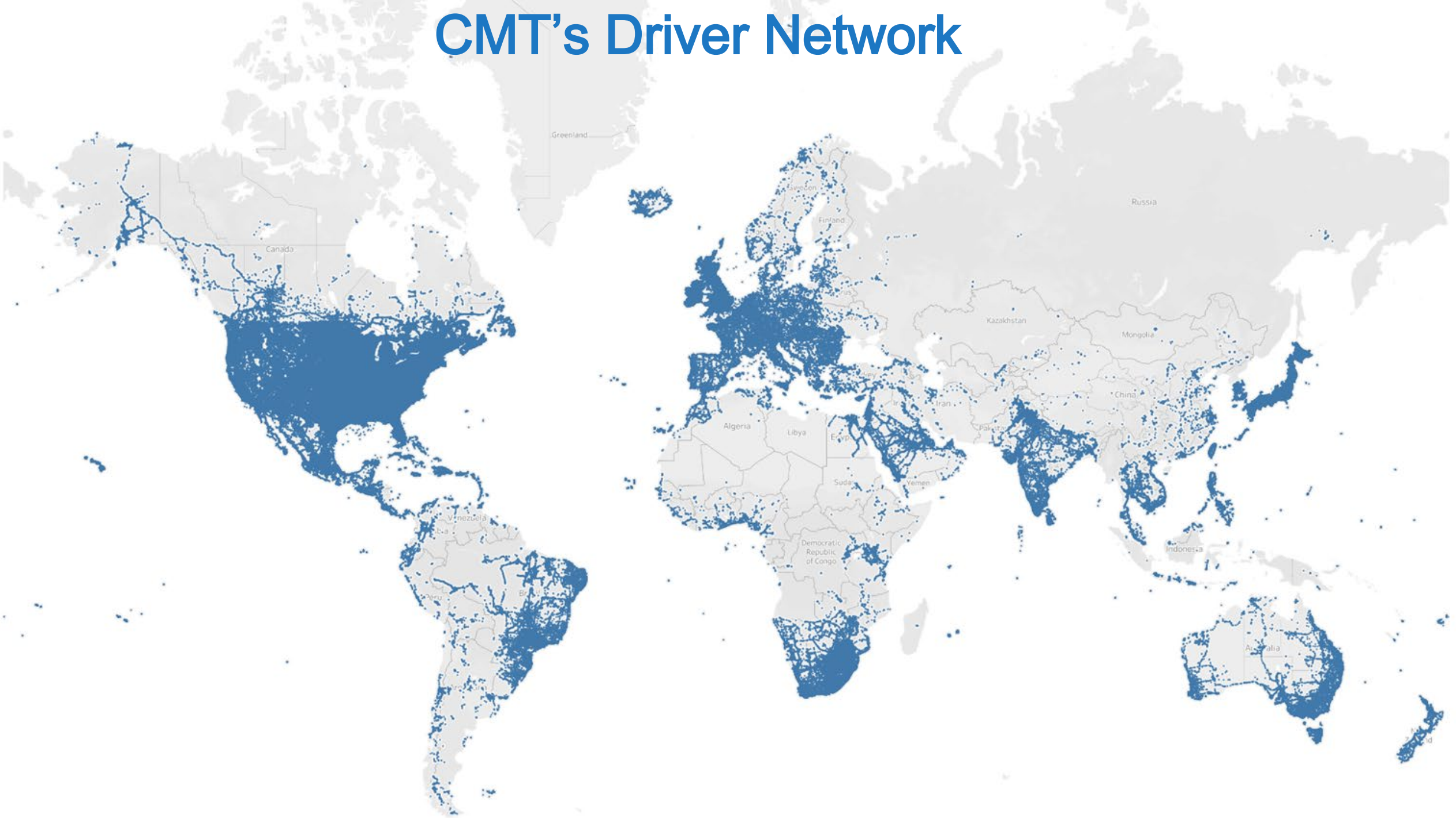
41 Million Drivers Evaluated

Approved by 49 Departments of Insurance (including DC)

100% Opt-In
100% Voluntarily



CMT's Driver Network



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Phone Distraction Event Definitions

Phone Motion

- Screen is on and unlocked
- Phone is being physically moved
- The car is in motion

Phone Screen Interaction

- Device motion indicates interaction with the phone screen
- The car is in motion

Risk Factors


Phone Motion


Phone Tapping


Speeding


Braking


Road Type

34%

OF DRIVERS WERE DISTRACTED THE MINUTE BEFORE THEY CRASHED

Crash Storyline

OVERVIEW | EVENTS

Print Page

Crash Info

Driver ID:

Crash Time: Jun 17, 2023, 11:23 p.m.

Crash Location: I-85, Atlanta, GA 30329, USA

Crash Description

The driver was traveling Northeast along Northeast Expressway at 71 mph at 11:23:41 p.m. on Jun 17, 2023. The driver then began braking prior to the impact. At 11:23:42 p.m. a collision occurred on the rear and left sides of the vehicle while the vehicle was traveling at 55 mph. The driver's phone was in use prior to the impact. The driver was speeding prior to the impact. The collision event ended at 11:23:45 p.m. when the vehicle reached a speed of 9 mph. The vehicle was spinning during the crash. The airbag deployed. The vehicle rolled over as a result of the collision. The driver did not continue on their trip after the crash event.

Impact Severity

Hit Location

Airbag

Contextual Information

Speed Limit
55 mph

Speed Of Impact
55 mph

Road Type
Interstate

Traffic Condition
N/A

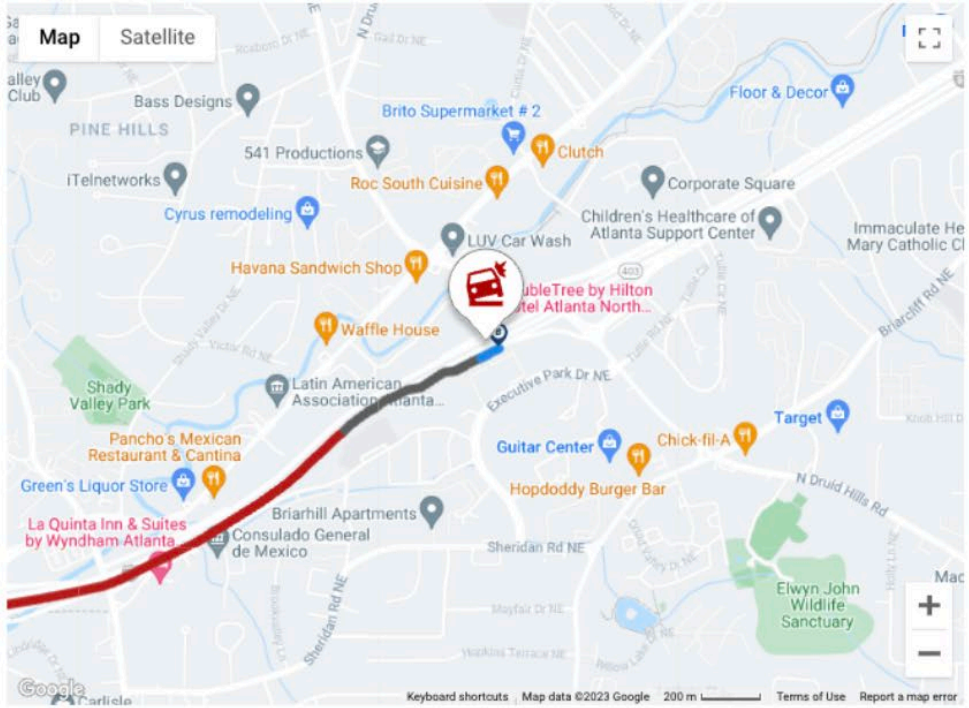
Weather Condition
Mostly clear 74 °F

Visibility
2 miles

Travel Direction
Northeast

Incident Location

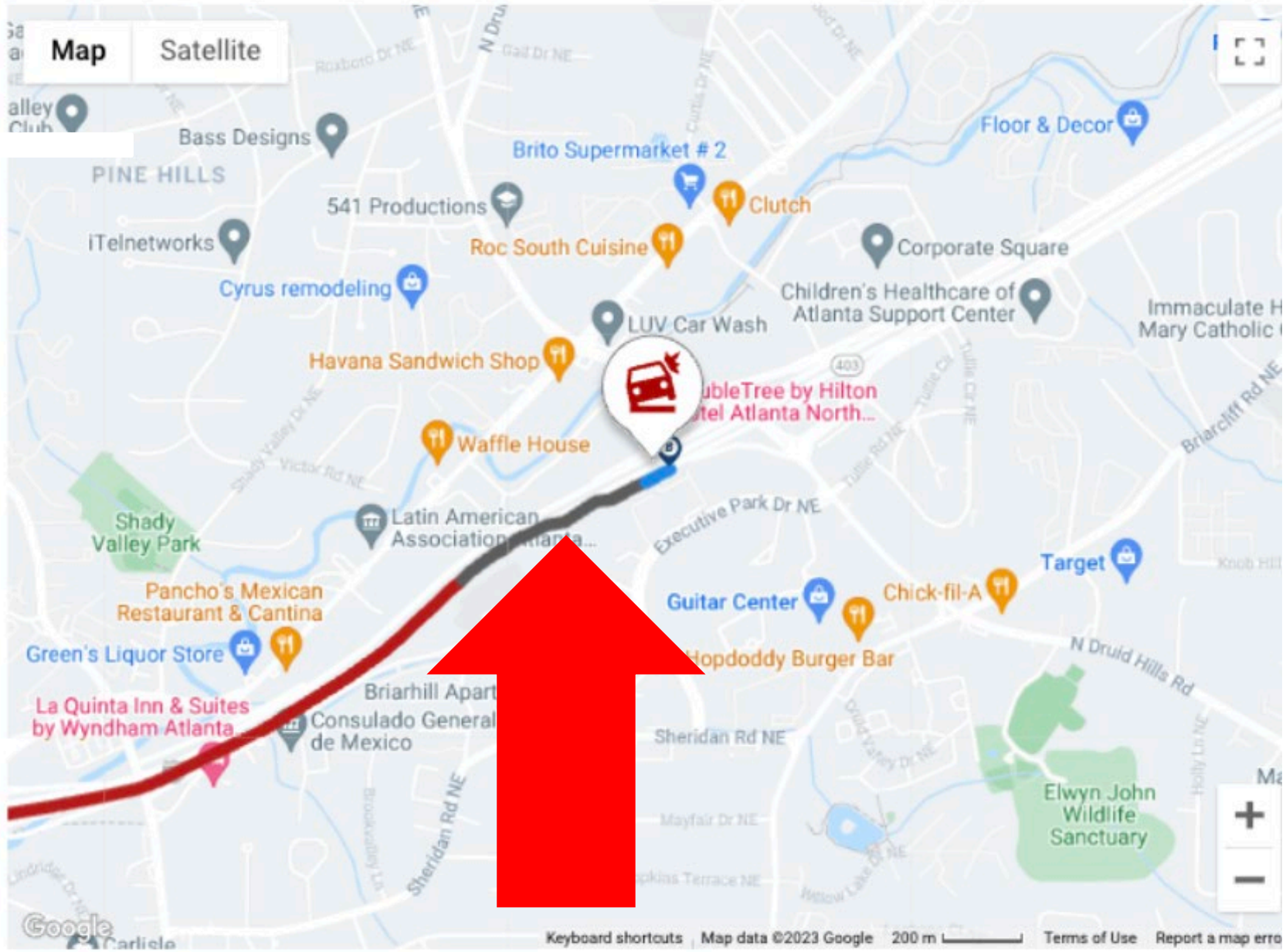
Traffic Signs | Point of Interest | Map View | Street View



Trip Start | Trip End | Crash Location | Distraction | Speeding

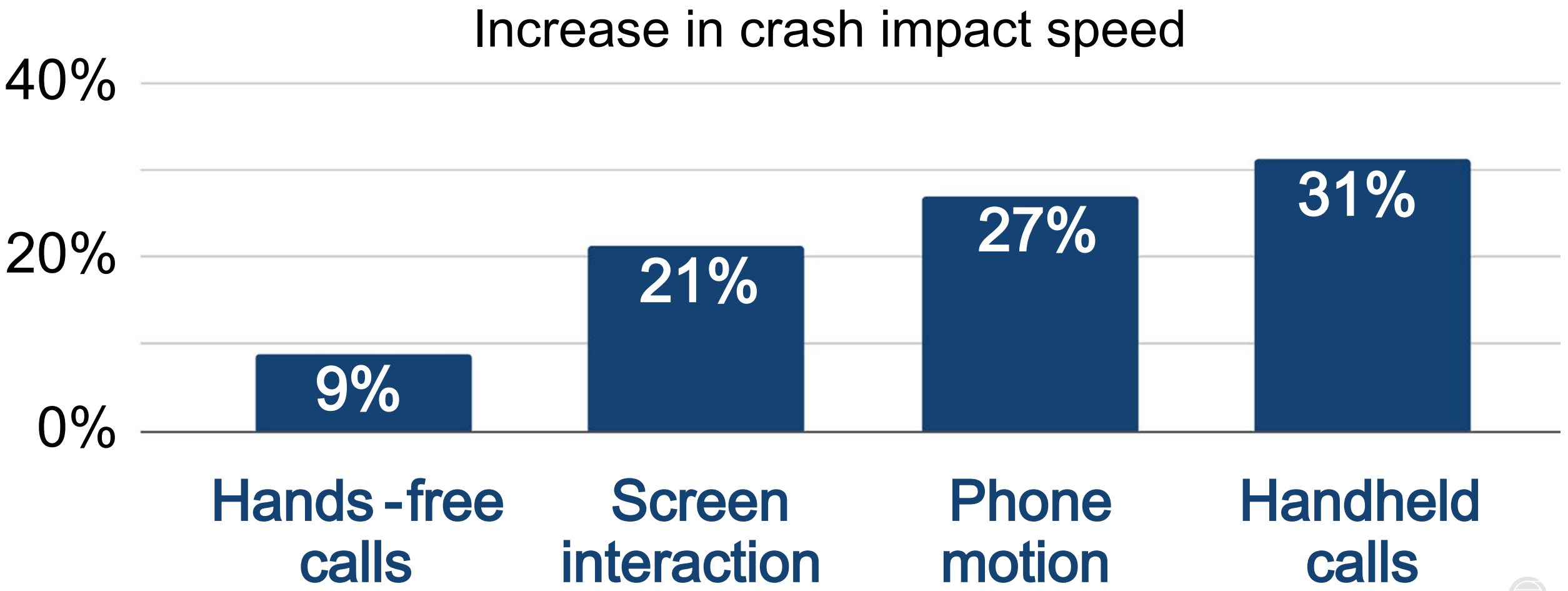
Incident Location

Traffic Signs | Point of Interest | Map View | Street View



Trip Start | Trip End | Crash Location | Distraction | Speeding

Distracted Drivers Crash at Higher Speeds



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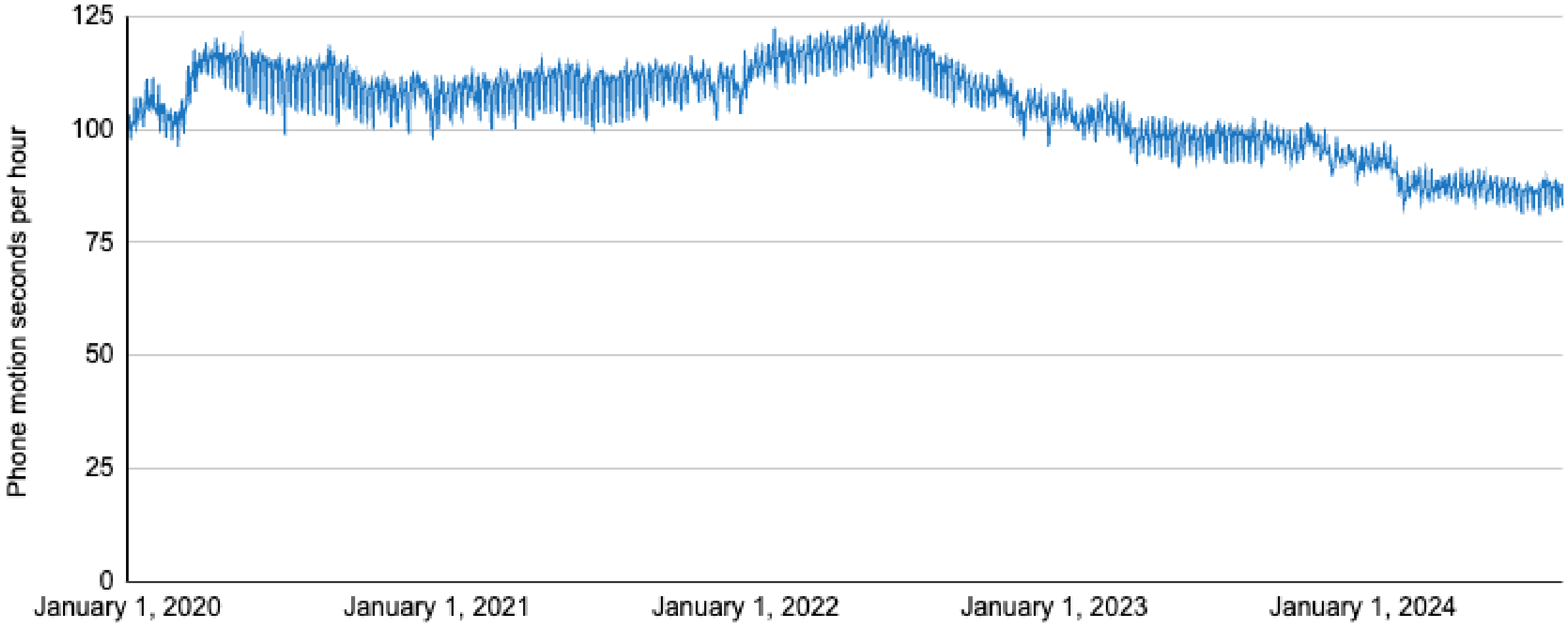
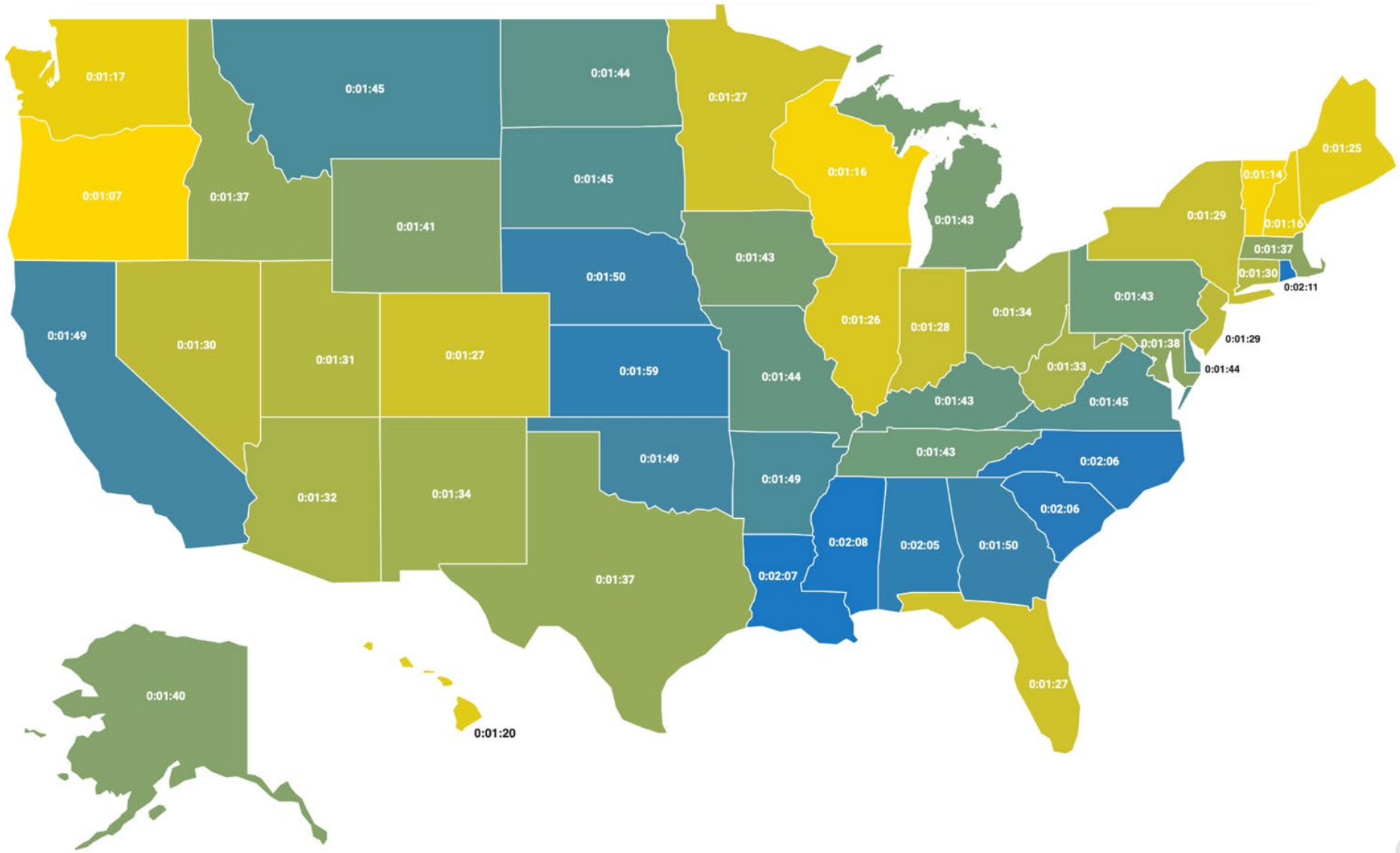
Phone motion distraction: 2020 - 2024 (through August 24)



2023 US Distraction Index

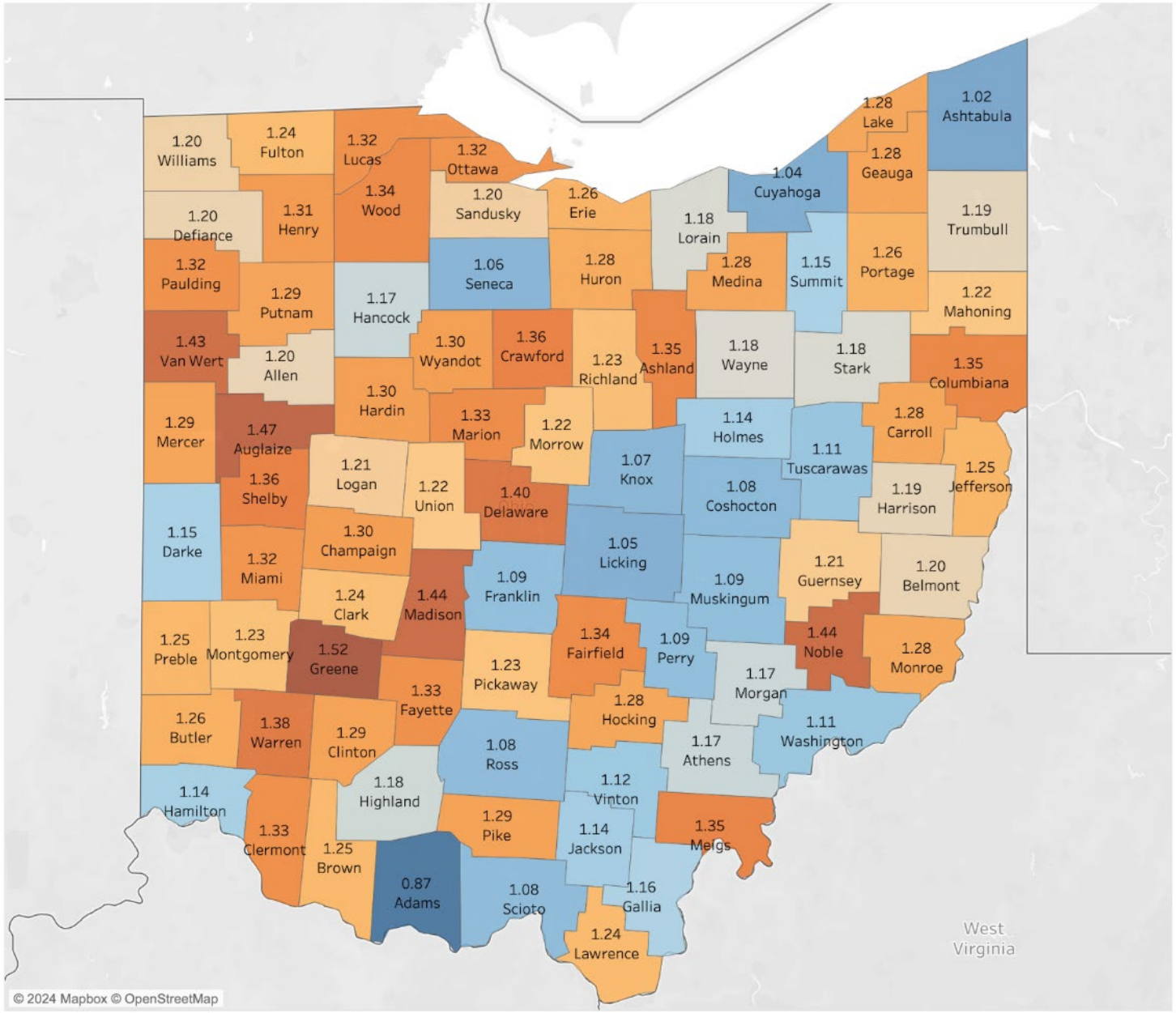
Most

Least



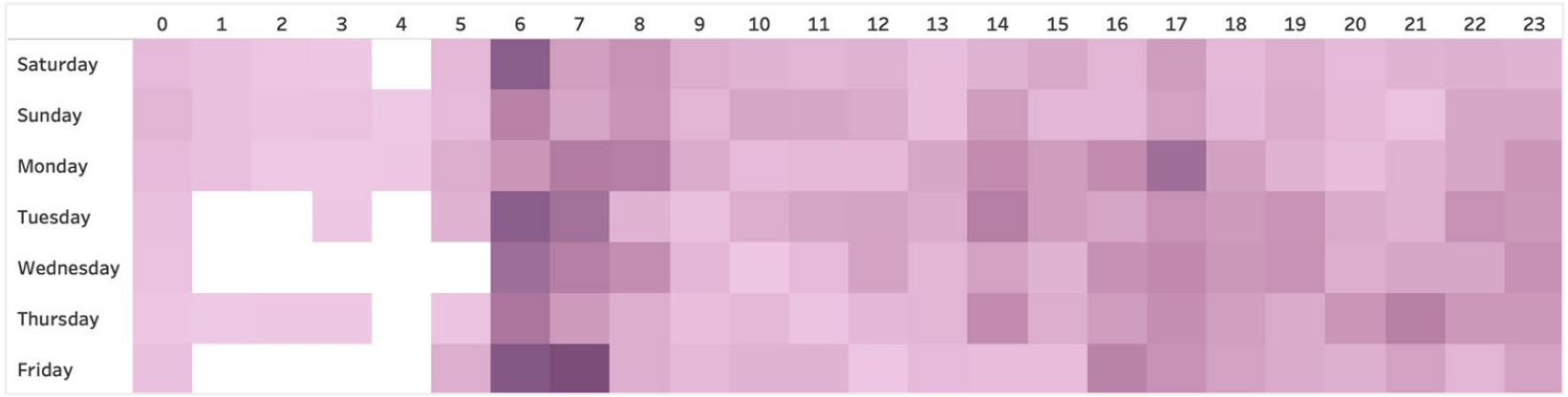
Distraction across County

Ohio Monthly Distraction Report: June 2024

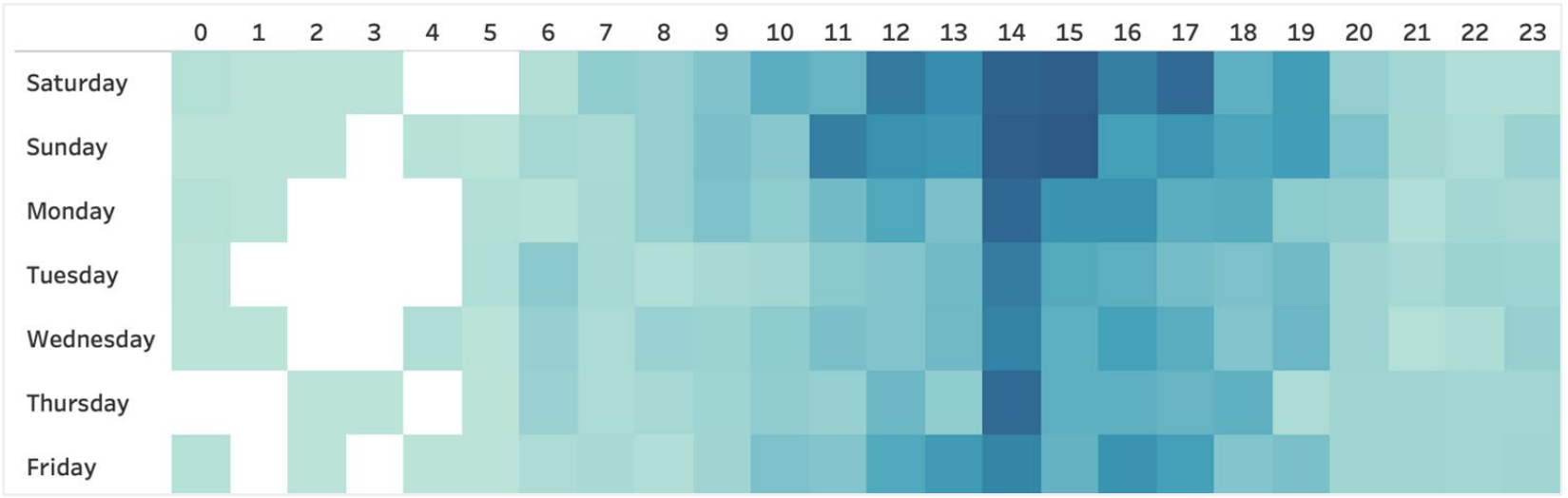


Distraction Over Day of Week & Time

Speeding events by day of week and local time



Phone distraction events by day of week and local time



LA County, CA

2021 - 2022

Prevent Serious Injury and Fatal Crashes Before They Occur

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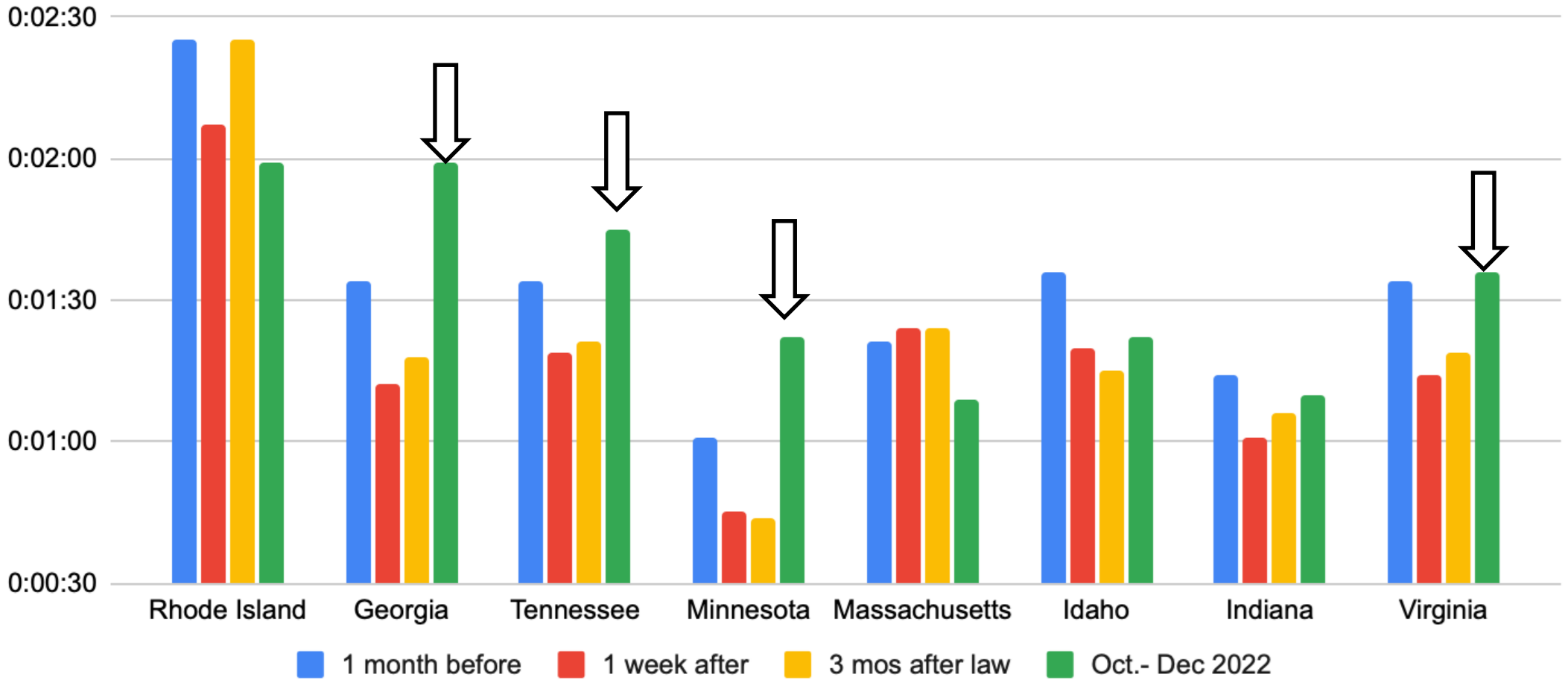
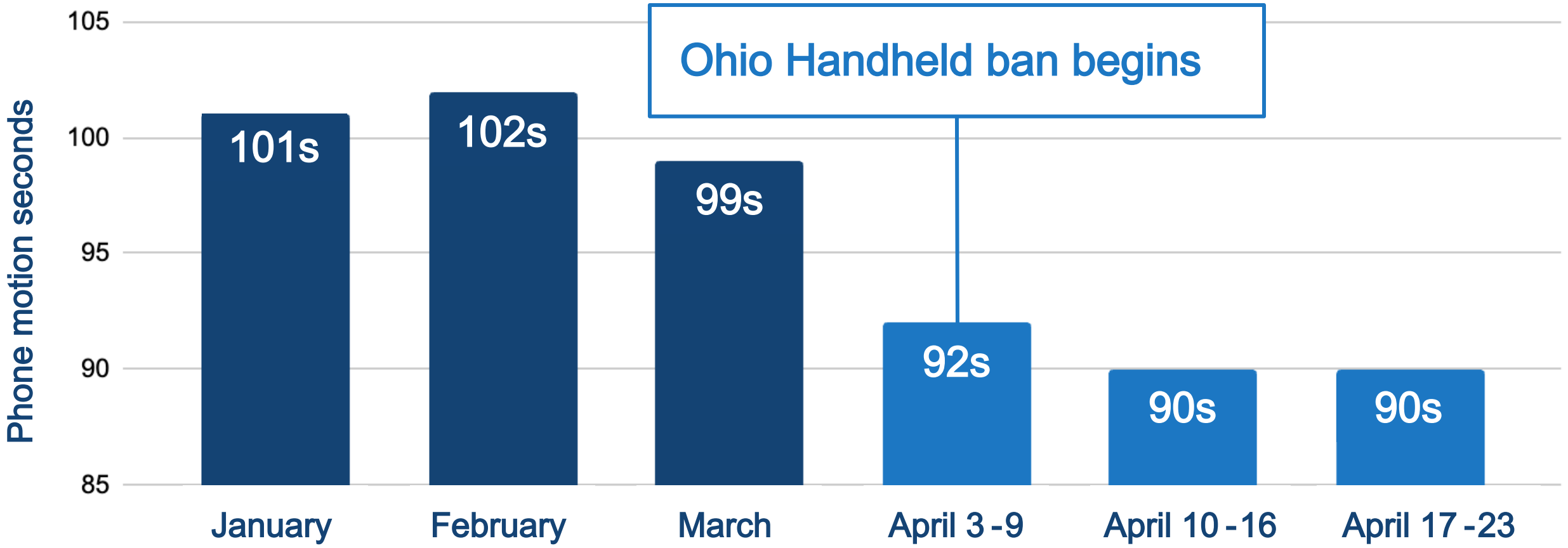
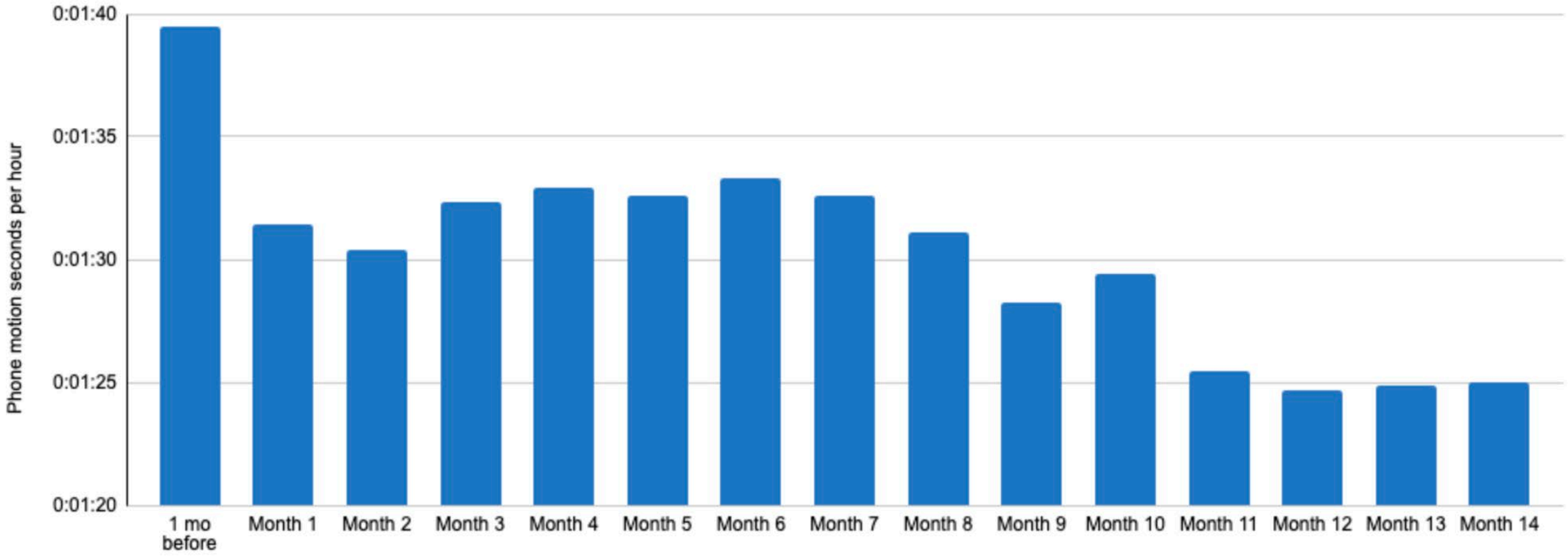
Handheld bans & phone motion



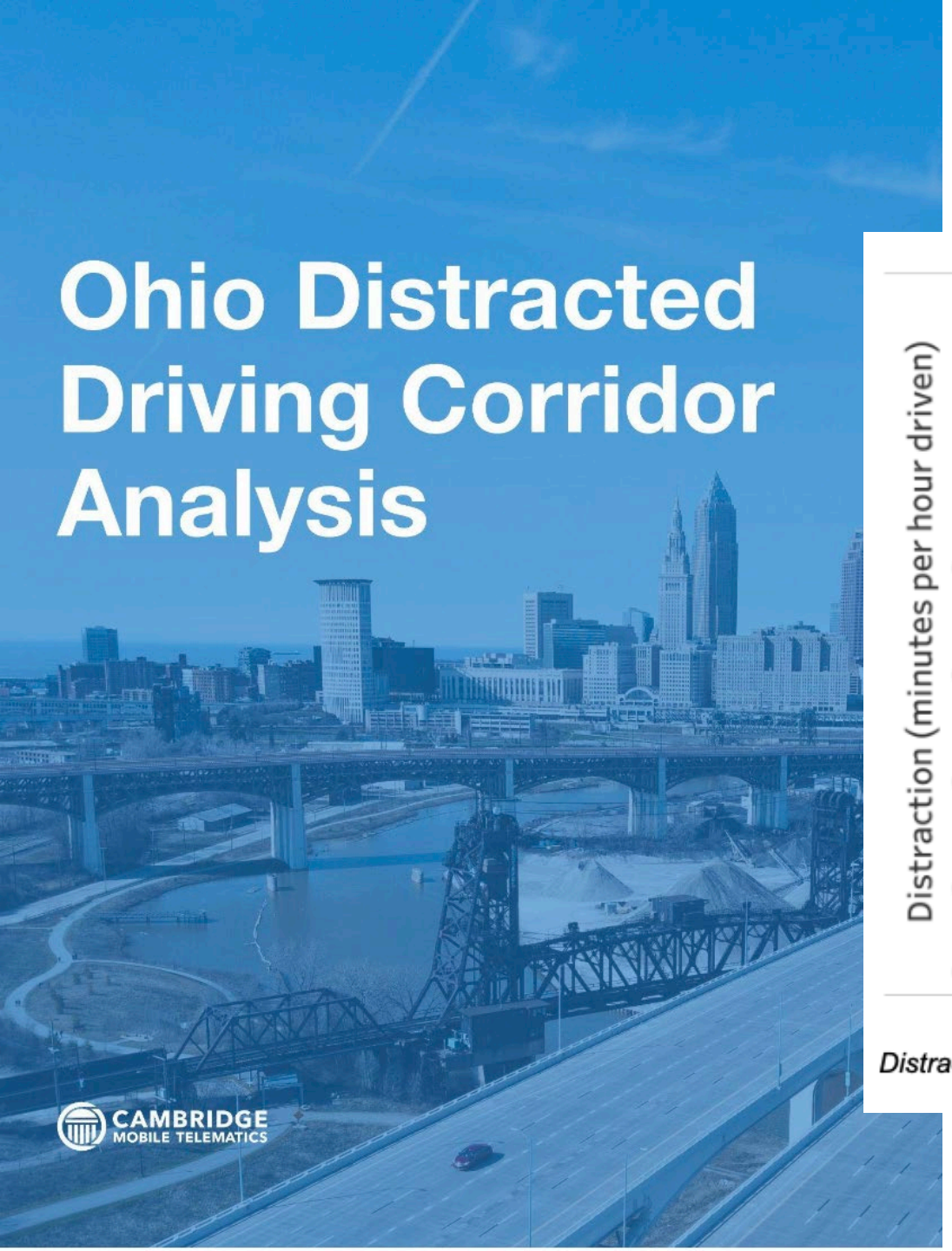
Ohio's handheld ban reduced distracted driving by 8%



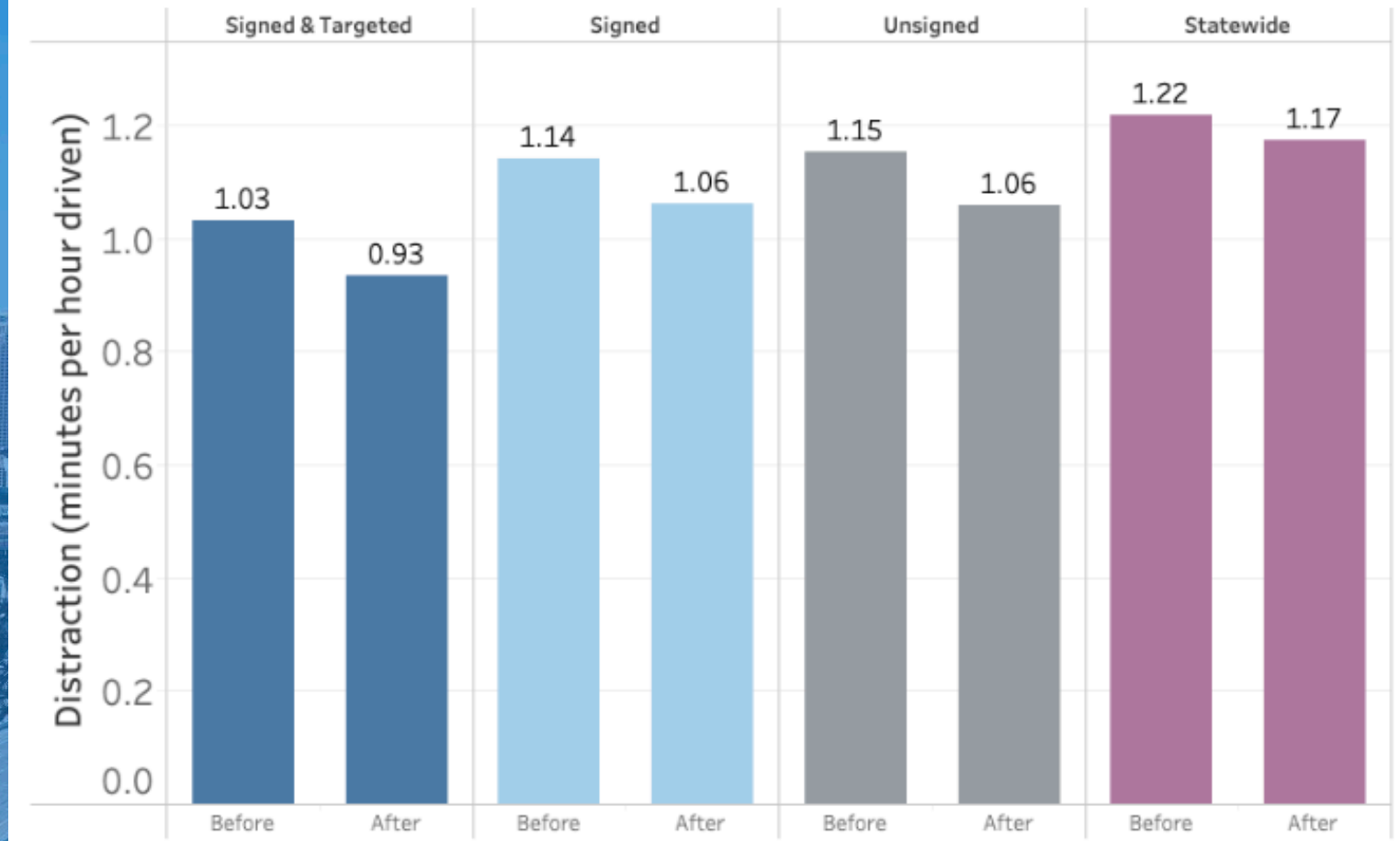
Ohio Hands Free



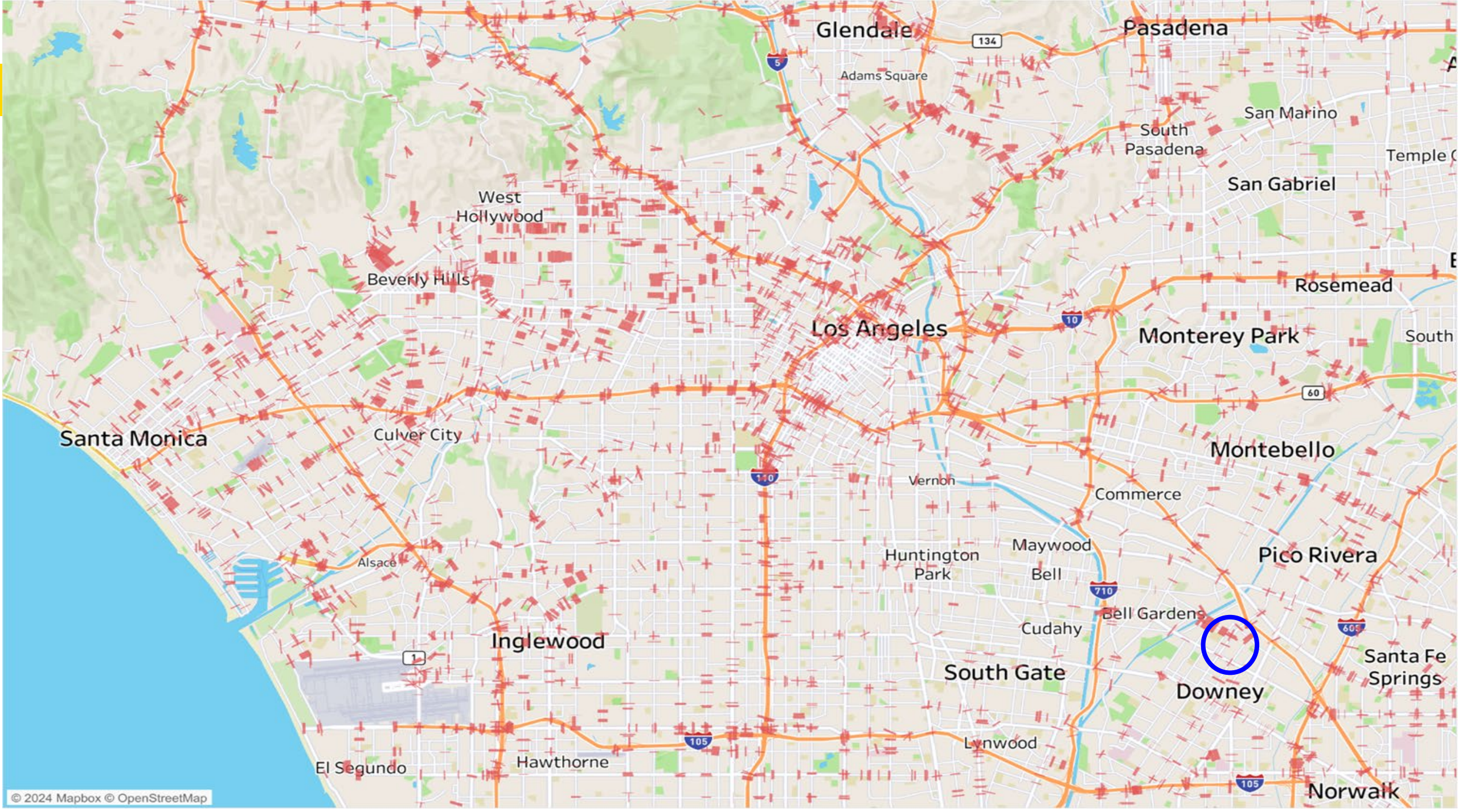
Ohio Distracted Driving Corridor Analysis



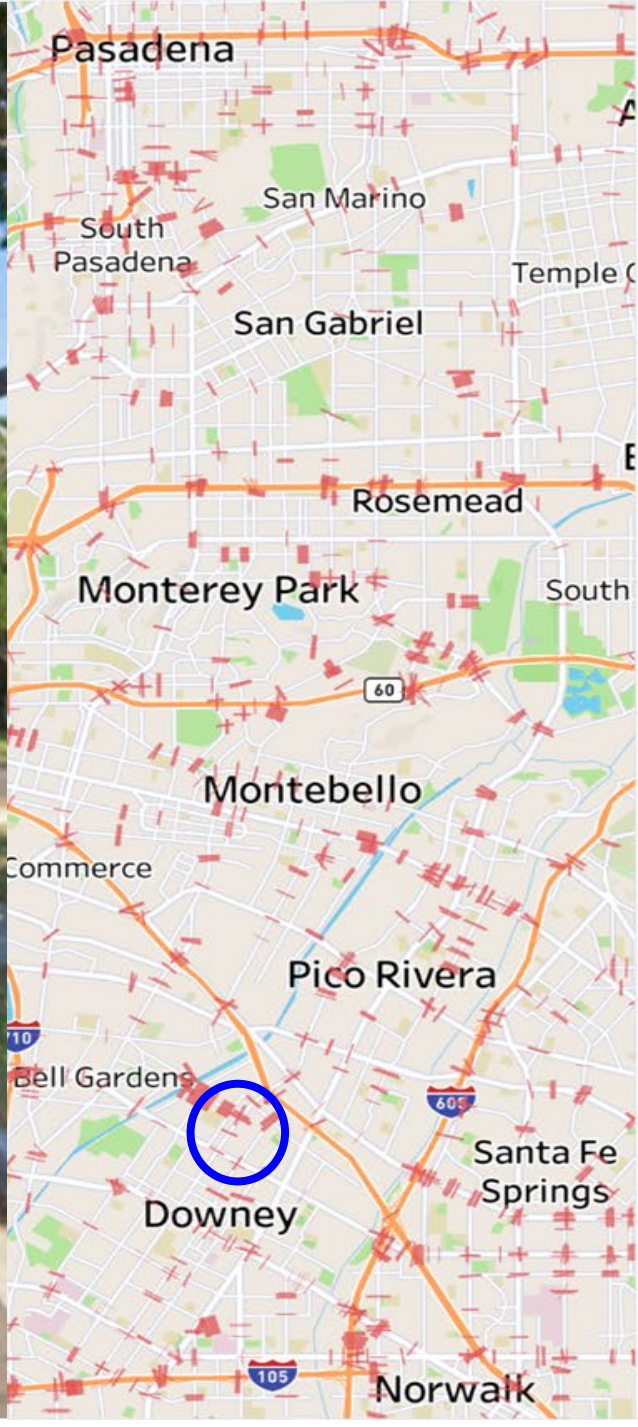
CAMBRIDGE MOBILE TELEMATICS



Distraction rates by type of corridor before and after increased enforcement. All of the corridors showed a decrease.


Glendale
Pasadena
Adams Square
San Marino
South Pasadena
San Gabriel
West Hollywood
Beverly Hills
Rosemead
Los Angeles
Monterey Park
Santa Monica
Culver City
Montebello
Vernon
Commerce
Maywood
Huntington Park
Bell
Pico Rivera
Alsace
Bell Gardens
Cudahy
Inglewood
South Gate
Santa Fe Springs
Downey
Lynwood
El Segundo
Hawthorne
Norwalk
© 2024 Mapbox © OpenStreetMap


STOP
Suva St
© 2022 Google


Pasadena
San Marino
South Pasadena
San Gabriel
Rosemead
Monterey Park
South
60
Montebello
Commerce
Pico Rivera
Bell Gardens
605
Santa Fe Springs
Downey
105
Norwalk

StreetVision

Area of Interest: State | State Name: Texas | Analyze By: Counties | Functional Classification: All | Driving Behavior: -- Select One -- | Time Period: Last 30 Days

Using data to prevent crashes

Identify risky hotspots

Evaluate campaigns

Measure impact of roadway changes