



MICHELIN

MOBILITY INTELLIGENCE

Road SAFETY RISK Study - Report:
NAPA COUNTY

MTC Vision Zero Working Group

Thursday, February 19, 2026

Prepared for:

NVTA
NAPA VALLEY TRANSPORTATION AUTHORITY



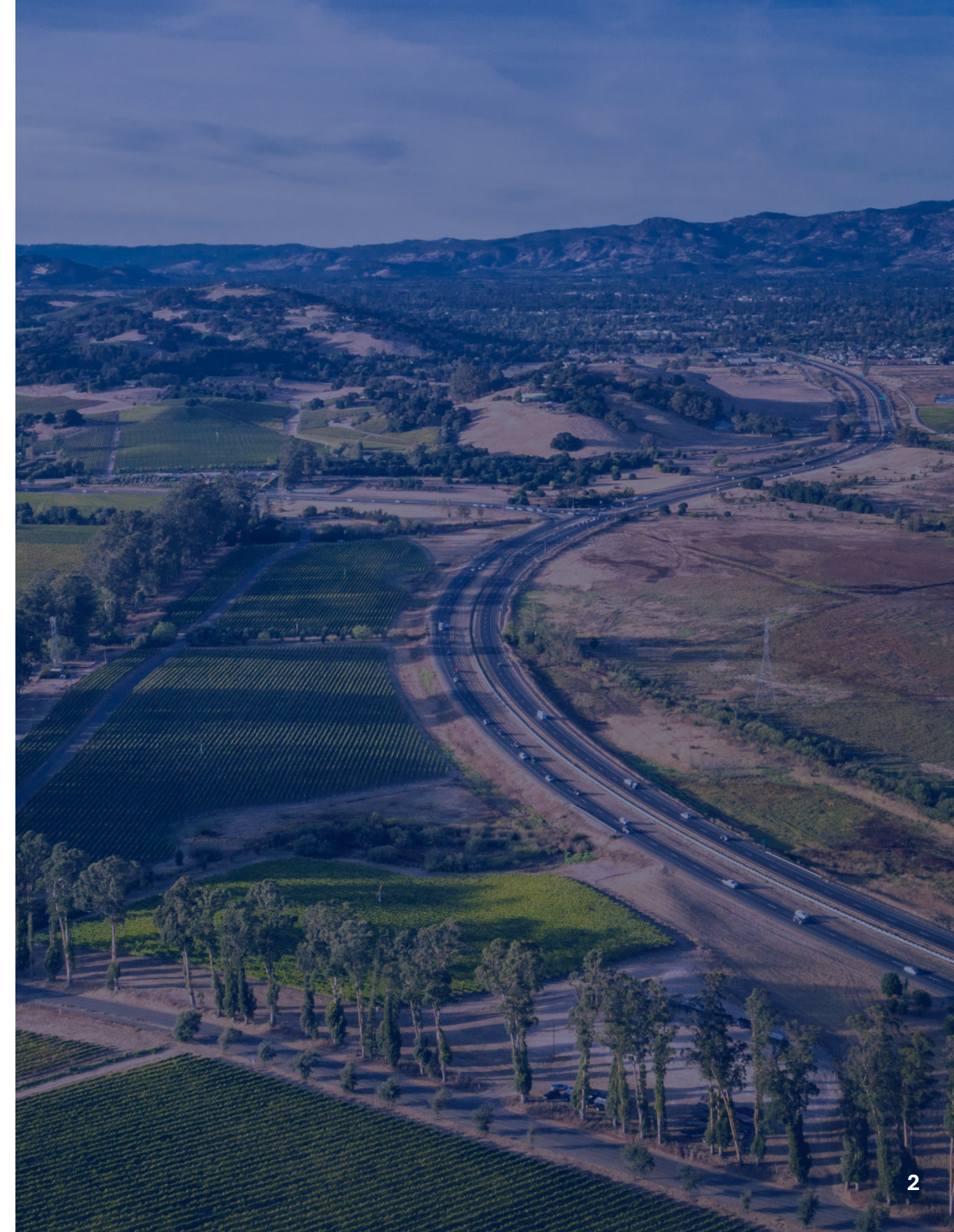
Project Overview

PROJECT GOAL:

- NVTa's primary objective is to **identify safety risks** for all road users across Napa County's road network in support of advancing the Vision Zero Plan.
- Using MMI insights, the study pinpoints high-risk areas based on driving behaviors that are not evident through traditional crash data analysis

KEY SAFETY CHALLENGES :

- Heavy intra-county travel by residents and commuters, combined with high levels of tourism generates significant traffic volumes and safety risks.
- Presence of Vulnerable Road Users (VRU's)-pedestrians and cyclists exposed to speeding and impaired driving.
- Safety concerns around tourism centers
- School zones with recurring issues related to VRU's and speeding



PROJECT SCOPE

TIME PERIOD:

April, May, June 2024

TREND ANALYSIS COMPARISON:

- April, May 2023
- April, May 2024

GEOGRAPHIC SCOPE:

Napa County, California



Understanding Michelin's data

What is telematics?

Telematics uses data from mobile apps and in-vehicle systems to monitor how, when, and where vehicles are driven.



DATA COLLECTION

Mobile devices and vehicle systems track things like speed, location, braking, and acceleration.



WIRELESS TRANSMISSION

That data is sent in real time through cellular or satellite networks.



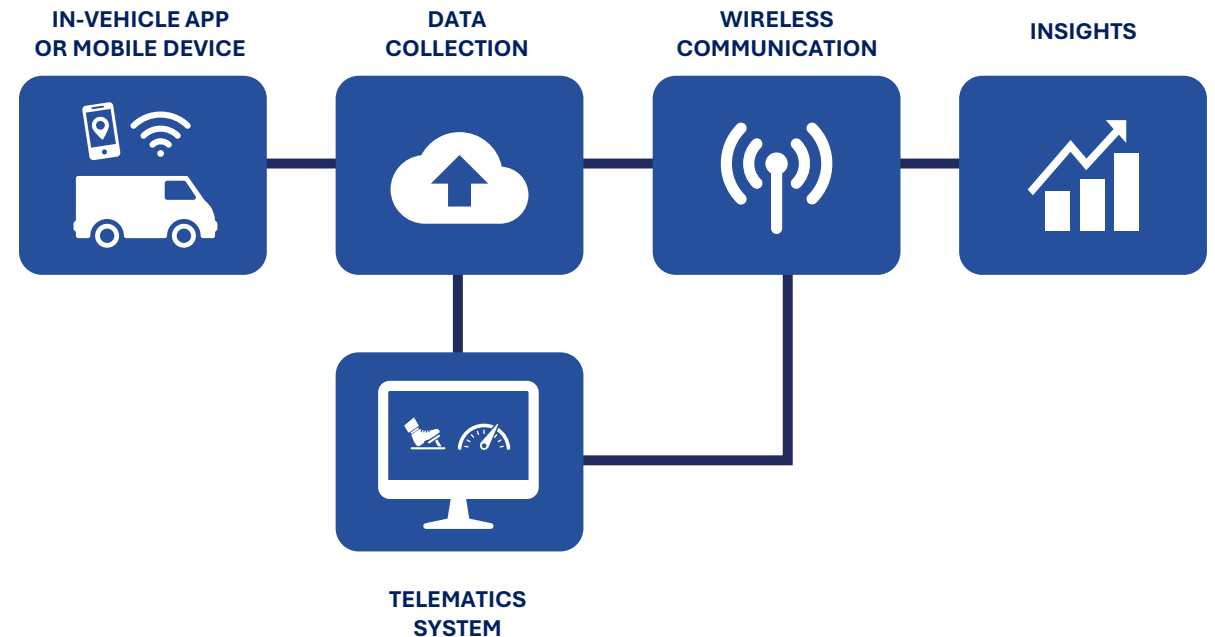
DATA PROCESSING

The information is aggregated, analyzed to spot patterns, risks, and opportunities for improvement.



ACTIONABLE INSIGHTS

Planners and safety teams receive near real-time data and insights to make smarter decisions, like where to improve roads or adjust traffic enforcement.



Turning telematics data into safety intelligence

Michelin leverages telematics driving behavior data from over 40,000 mobile apps. Our data science and engineering experts turn vast amounts of anonymized and aggregated behavioral and traffic data into road risk insights to supplement crash data.

Our insights are designed to help road safety professionals not only understand the “what,” but also the “why, when, and where” behind their riskiest roads.

Driving Event Data:



Harsh Braking



Harsh Acceleration



Speed Insights



Weather



Location



Driving Direction

Safety insights to Help:



Identify Risk Hotspots



Protect Vulnerable Road Users



Measure Impact

Data aggregated and de-identified; collected with user consent.

Vulnerable Road User (VRU) Risk Analysis



Michelin's crash risk model overview

Turning driving patterns into predictive insights to spotlight where severe crashes are most likely to occur

HOW IT WORKS

For each road segment, MMI's advance crash risk model calculates a "systematic crash risk" for vehicles and vulnerable road users by learning from the complex relationships that exists between different input data sources

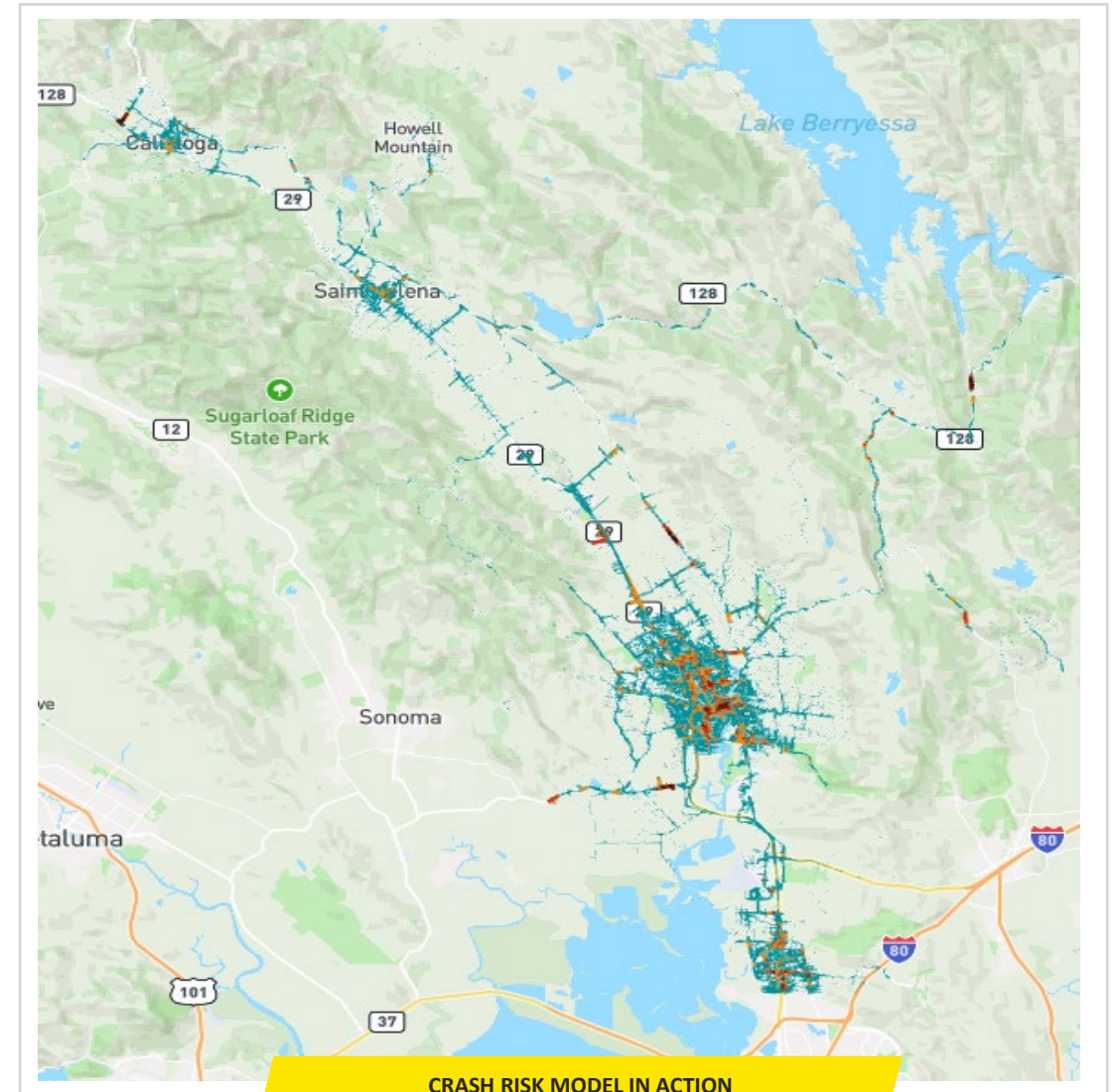
Model identifies complex relationships in:

- ✓ Driving Behavior
- ✓ Speed Data
- ✓ Traffic Volume
- ✓ Road Network Structure
- ✓ Point of Interest locations (e.g., restaurants, shopping centers, etc.)

WHY IT MATTERS

ACCURATE PREDICTIONS & PROACTIVE INSIGHTS

Our model delivers high-confidence crash predictions, accurately identifying the majority of risk zones even before crashes occur.



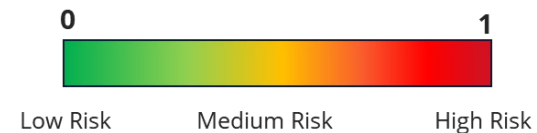
School Zones

Focus on School Zones

School Name	Score
Unidos Middle School, Napa <i>*Improvements done in 2025</i>	0.75
St. John's Lutheran K-8, Napa	0.75
Valley Oak High & Napa High School, Napa	0.70
Palisades High School, Calistoga	0.70
Blue Oak School K-8, Napa	0.62
American Canyon High School, American Canyon	0.62

SCORE CALCULATION:

The score is a comprehensive measure of safety risk around school zones. It combines multiple driving behavior indicators, each weighted by its potential risks, and considers both the physical impact (speed, severity) and the crash risks score, indicating the likelihood of harm to people (especially children and pedestrians) and vehicles.



Highlight AREAS

St. Helena SR29 and Pratt Avenue (Near Culinary Institute of America):

- **High-intensity braking events** are occurring at excessive speeds highlights
- **Significant VRU crash risks** for students walking and cycling to the institute and surrounding area.

Silverado Trail (Between Trancas Street and Lincoln Ave (Calistoga)):

- **Around 4.5 % of drivers** observed driving with at least **10 MPH over the speed limit (55MPH)**
- Highest speed reaching **101 MPH**.

Soscol Avenue & Silverado Trail (near La Cheve Bakery):

- **Frequent harsh braking** despite **safe driving speeds**
- Could indicate potential risks due to road design or other unsafe driving conditions.

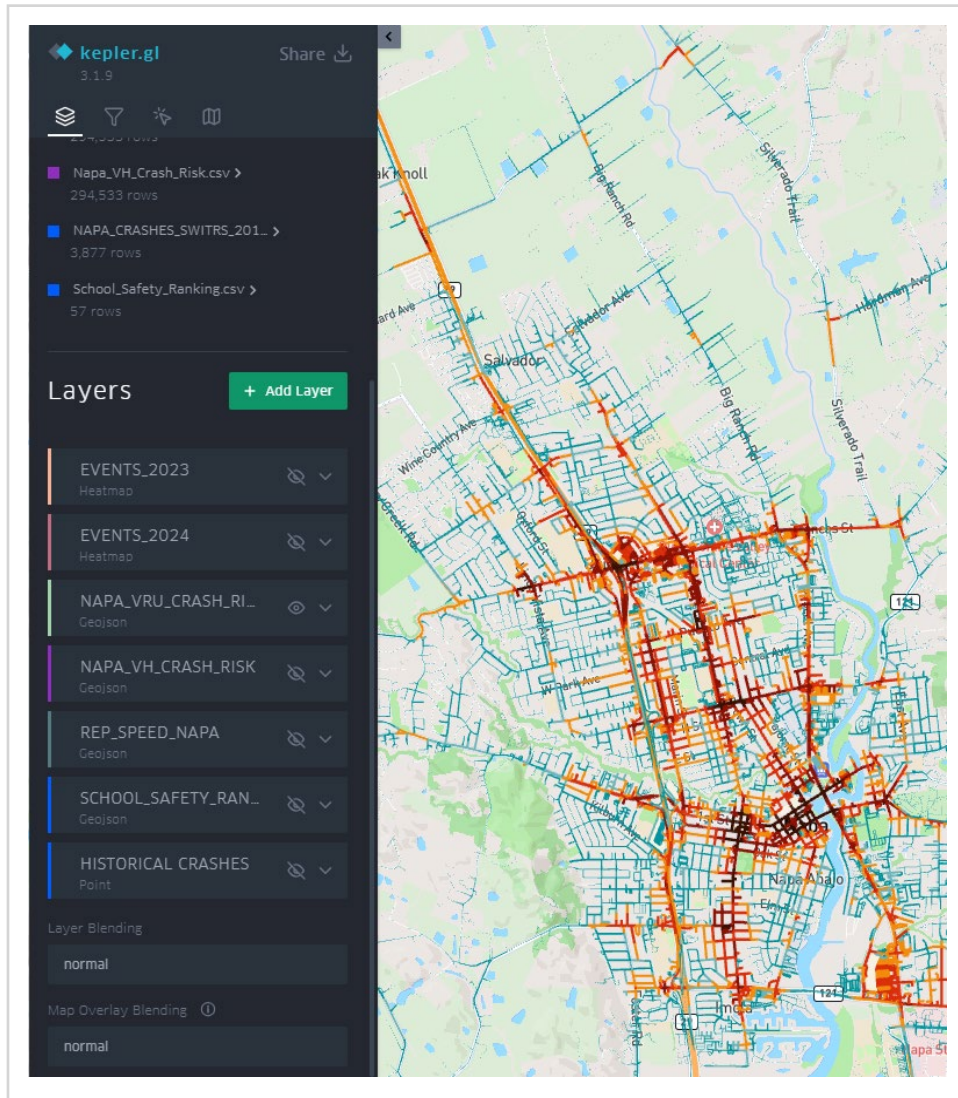


Key Takeaways



Key Takeaways

- While most drivers adhere to posted speed limits, a small percent of drivers consistently involve in **extreme speeding incidents - exceeding 100 MPH** and engage in extreme behaviors like harsh braking and rapid acceleration.
- **Hotspots of extreme driving behavior**—including extreme harsh braking , rapid acceleration, and speeding **near several school zones**—indicates high risks conditions for students near these schools
- Historical crash data and MMI’s VRU risk prediction model both indicate **consistent risks across the county for pedestrians and cyclists.**



A **ready-to-use, browser-based mapping tool** is provided to support deeper data exploration and facilitate ongoing monitoring and evaluation of programs and projects

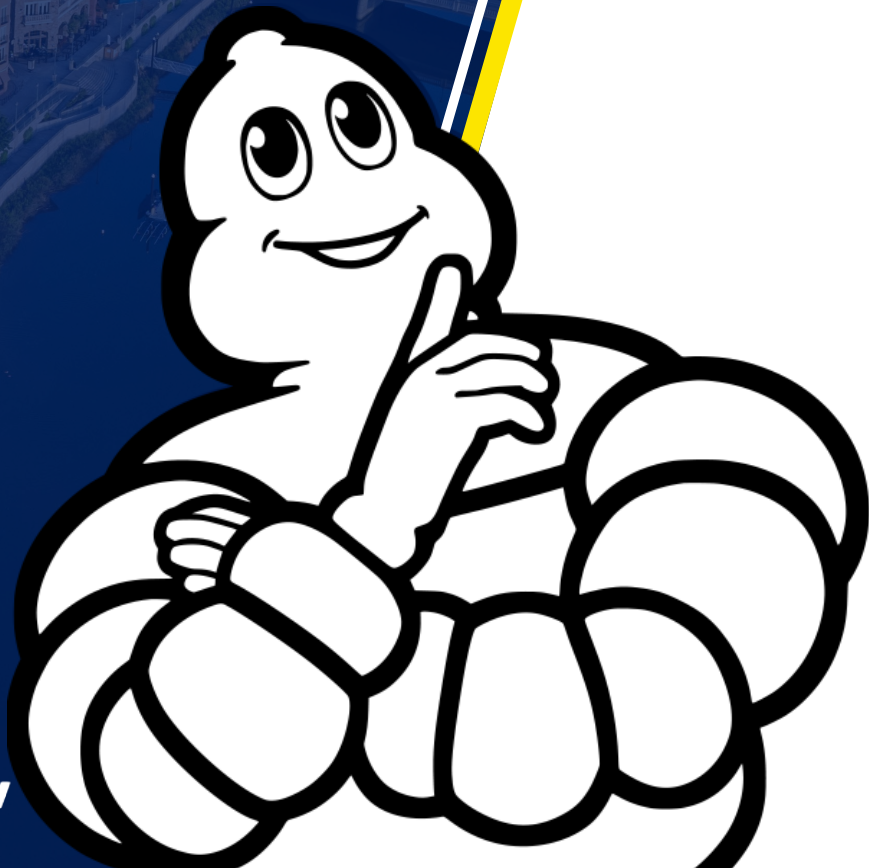
- ✓ **Strategic Alignment:** Supports data-driven decisions aligned with safety and planning goals.
- ✓ **Cross-Domain Utility:** Informs enforcement, infrastructure, policy, and community outreach.
- ✓ **Prioritization:** Focuses efforts and resources on high-risk areas
- ✓ **Monitoring & Evaluation*:** Tracks progress, validates interventions, and supports funding cases.
- ✓ **Community Engagement:** Enhances responsiveness and transparency through data-backed insights.

* Monitoring and evaluation capabilities will require additional data or subscription-based datasets

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Q & A



THANK YOU!!