

Transportation Performance Management Webinar Series

Webinar 32

AI's Impact on State DOTs

Sponsored by FHWA and AASHTO



August 26, 2026

2026 AASHTO Committee on Performance-Based Management

October 6–8, 2026 The Westgate Hotel | San Diego, CA

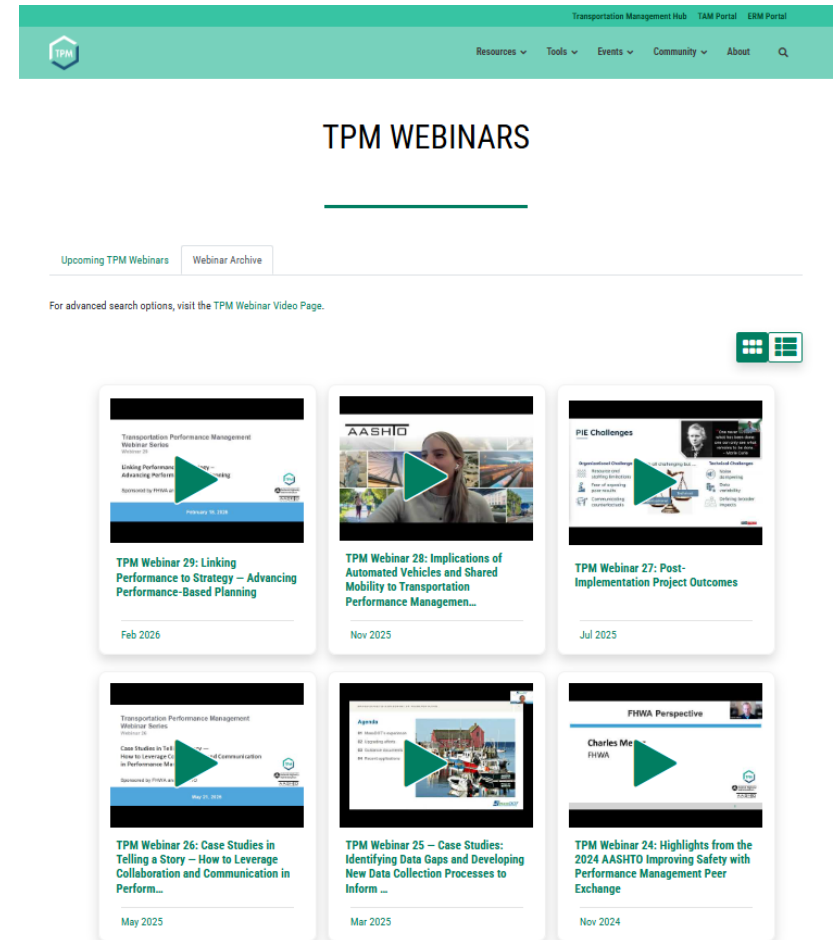


- Registration for the Annual Business Meeting is **now open!**
- This year's discussions will highlight:
 - Emerging performance areas
 - AI and advanced analytics
 - Resilience planning
 - Risk management integration
 - Innovative approaches to performance reporting
 - Data-informed decision making
- Hotel accommodations, airlines discounts, and more available on [CVENT](#)



Welcome!

- Today is the **32nd** webinar in our bimonthly series, held on Wednesdays at 2:00 PM ET
- Webinars cover a variety of topics with a performance management focus
 - You will be able to find the materials from this webinar on the TPM Portal: <https://www.tpm-portal.com/event-directory/tpm-webinars/>
- We are always welcoming ideas for webinar topics and presentations!
- Use the webinar chat to submit questions for today's presenters and ideas for future webinars





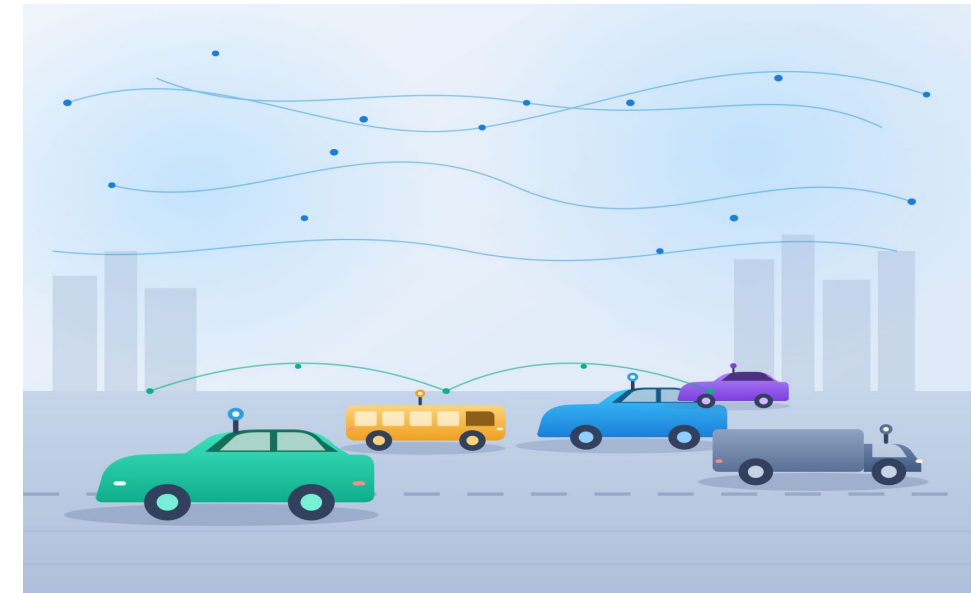
AASHTO TPM Webinar 32: AI's Impact on State DOTs

Intelligent Mobility: AI Meets Real Transportation

Key Takeaways from the RIDOT AI Symposium & Peer Exchange

Held August 19–20, 2026 · New England Institute of Technology, East Greenwich, RI

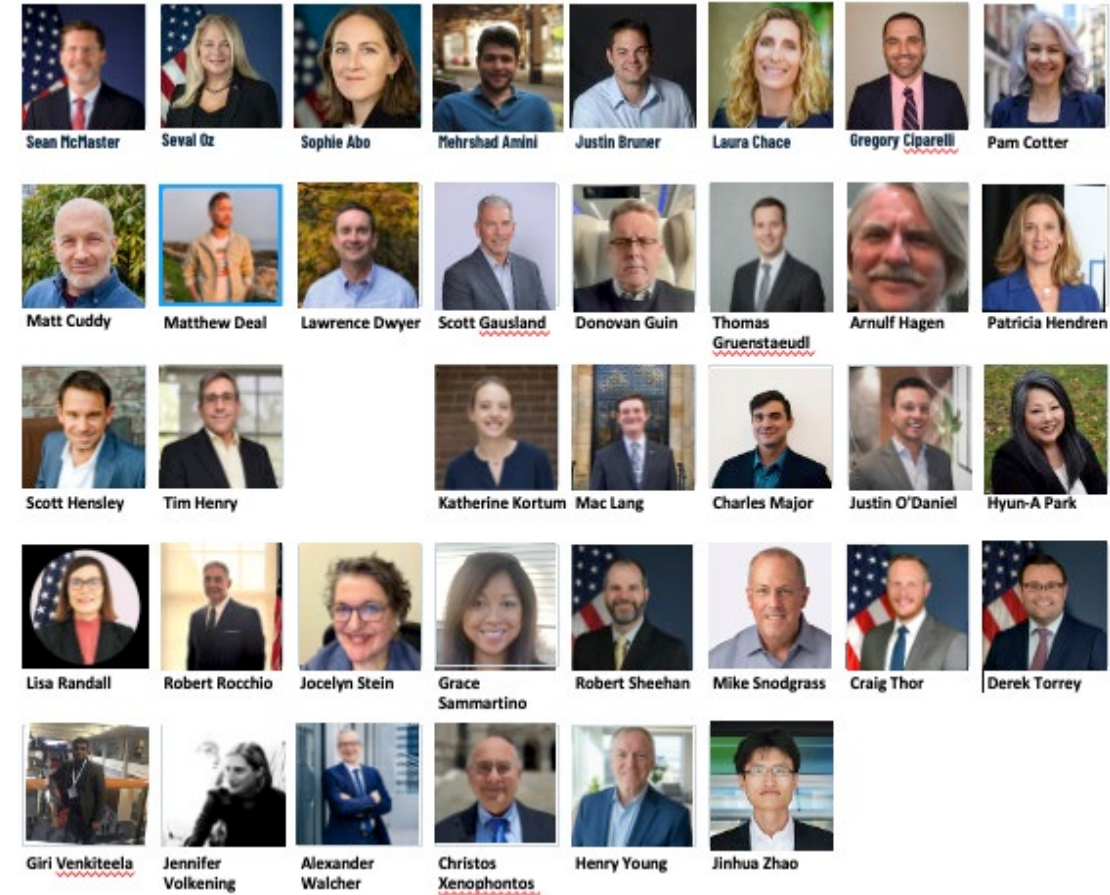
Wednesday, August 26, 2026



RECAP WEBINAR

Two Days, Twelve Conversations

- August 19–20, 2026 · NEIT, East Greenwich, RI**
 Two full days brought together USDOT & FHWA leaders, AASHTO, ITS America, TRB, state DOT leadership, engineers, planners, and researchers.
- Keynotes, panels, roundtables, case studies, and a live exhibition**
 A mix of formats designed for real exchange, not just presentations.
- Twelve sessions spanning governance, safety, operations, and asset management**
 Anchored by one cross-cutting theme in every session: workforce.



DAY 1 · RECAP

Foundations, Safety, and System Performance

- Keynote & Fireside Chat — The Road Ahead: AI as the New Infrastructure
- Panel — Governance Frameworks for AI Development and Deployment
- Technical Session — AI for Proactive Road Safety
- Technical Session — Optimizing ITS and Mobility Systems with AI
- Case Study Showcase — Real-World AI Deployment (US & international)
- Peer Roundtable — Getting Started: Building an AI Strategy

Workforce Input, Organizational Readiness & Ethical Guardrails

MnDOT's GenAI Standard & Launch of Microsoft Copilot Training (Summer 2025)

- Responsible use, human verification, strict data-classification rules.
- Provides ethical guardrails addressing privacy, bias, fairness, and transparency.
- Agencywide Copilot training launched to build foundational skills and ensure responsible AI adoption.

Employee AI Survey (Fall 2025)

- Strong interest from employees in AI's potential.
- Need for clear training, hands-on guidance, and gradual adoption.
- Concerns about accuracy, bias, skill deterioration, and over-reliance.

2

ITS AMERICA

PATH TO AI MATURITY SELF-ASSESSMENT WORKSHEET

PURPOSE

This self-assessment worksheet is designed to **help organizations evaluate their current state and readiness for AI implementation**. By working through the guide, your team will align expectations and gain a clear understanding of **how AI maturity is shaped** by your organization's unique context and risk profile, especially in the field of transportation. **Use this tool to identify strengths, pinpoint areas for improvement, and inform your next steps toward responsible, effective AI adoption.**

DIRECTIONS



1
Bring together a cross-functional team for a focused 60-90 minute session.



2
Work collaboratively through each section, discussing evidence and perspectives as you rate your organization's maturity.

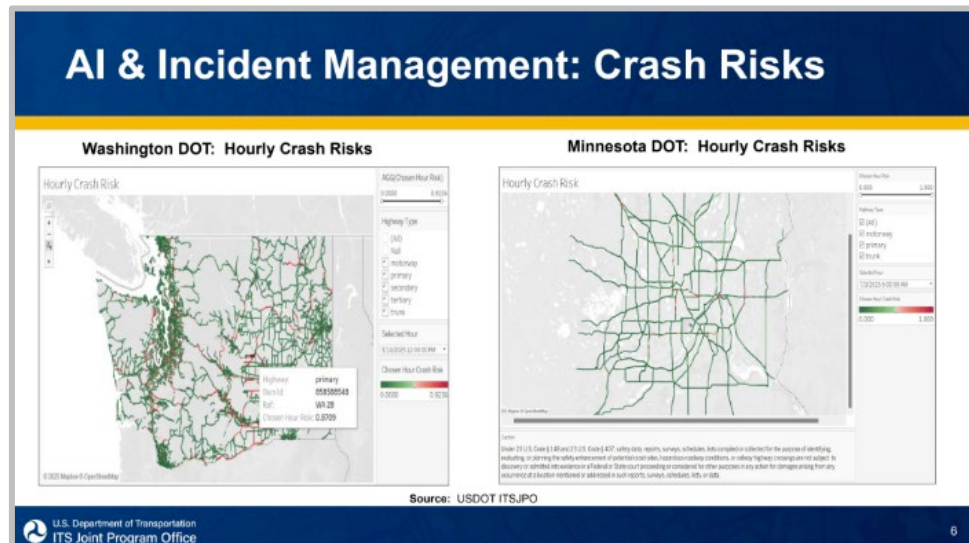
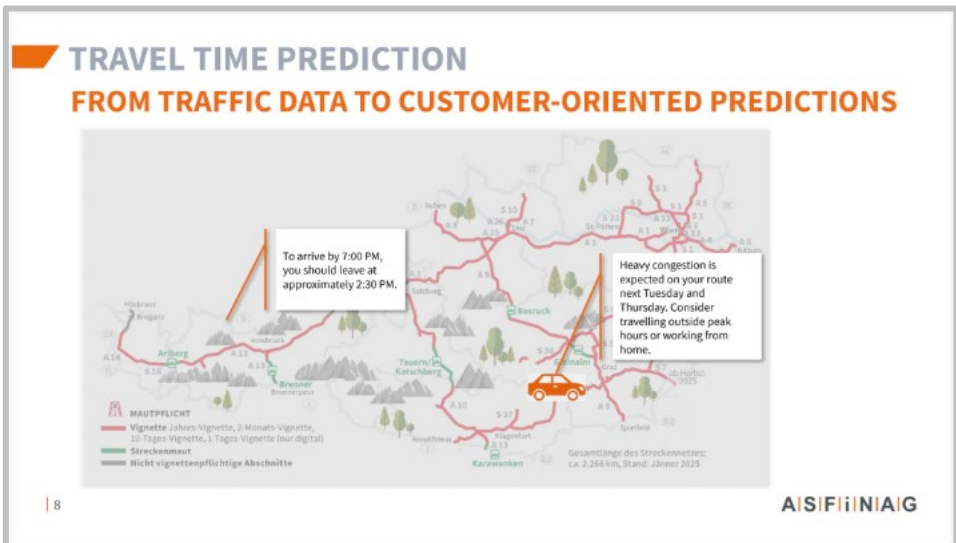
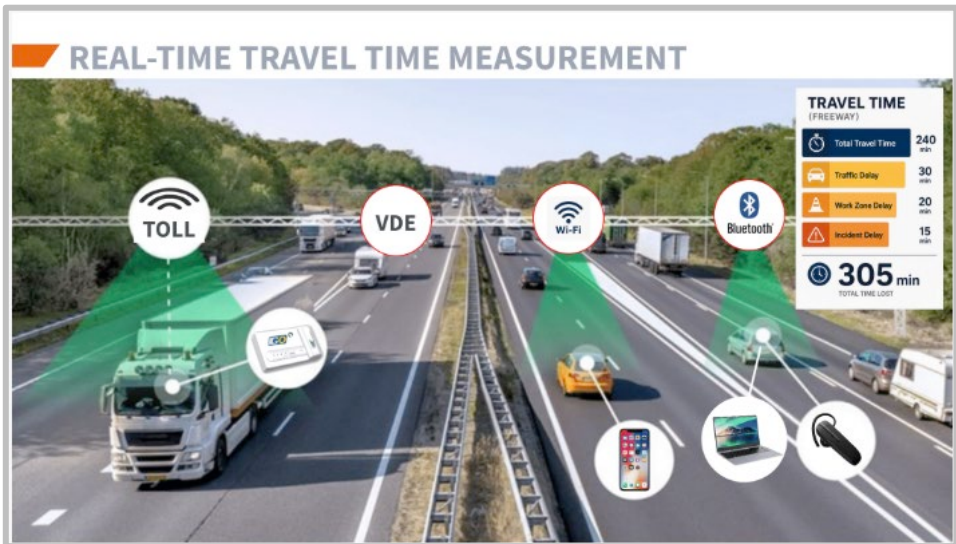


3
Use your scores and insights to develop a clear action roadmap for the next 12 months.



Scan to download

DAY 1 · RECAP



DAY 2 · RECAP

Asset Management, Planning, and Future Strategy

- Keynote & Fireside Chat — Mobility 2040: AI's Role in Next-Gen Transport
- Technical Session — AI in Planning and Project Development
- Technical Session — AI in Asset Management: Predictive Maintenance & Inspection
- Technical Session — From Data to Digital Twins
- Technical Session — Data Analytics and Fusion
- Peer Roundtable — AV and AI Integration



Making AI Approachable

Ready-to-use Pretrained AI models

- Cars
- License Plate Blurring
- Parking Lots
- Land Cover
- Parking Spots
- Humans
- Crowd Counting
- Face Blurring
- Buildings
- Roads
- Parcels
- Ag Fields
- Swimming Pools
- Well Pads
- Oil Spills
- Palm Trees
- Power Lines
- Transmission Towers
- Insulator Defects
- Wind Turbines
- Solar Arrays
- Solar Panels
- Ships
- Shipwrecks
- Segment Anything Model (SAM)
- Trees
- Plant Leaf Disease
- Common Object Detection
- Text Parsing from Photo
- Object Tracking

new

- Canopy Height Estimation
- Hugging Face Hub Integration
- Depth Anything
- Prompt-Based Segmentation
- Pedestrian Infrastructure Classification
- Wildfire and Smoke Classification
- Wildfire Delineation
- Damage Classification
- TextSAM
- CLIP Zero-Shot Classifier
- GroundingDINO
- Damage Assessment (Drones)
- Map Simplification
- Edge Detection
- Vision-Language Context-Based Classification
- Building Point Classification
- Building Change Detection

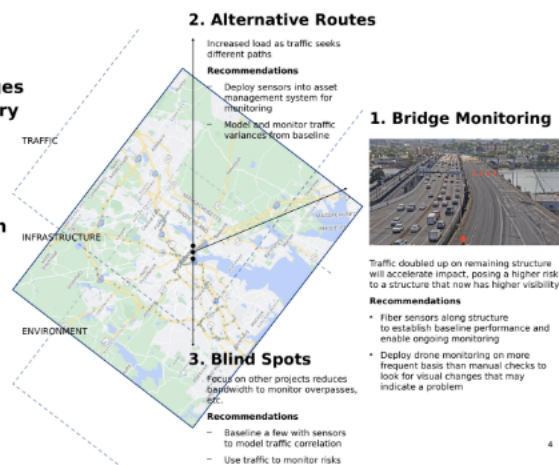
... Automating Workflows
... Creating New Data Layers

Visualizations include: Flood Segmentation, Cars (SAM), Change Detection Buildings, Clouds, Building Footprints, Crop Classification (Prithvi), Map Simplification, and Land Cover.

DAY 2 · RECAP

Key Questions

- How can RIDOT monitor the bridges for structural health as they carry more traffic?
- How can RIDOT tell what the sensor readings mean, and how can we tell what is normal vs. an important change?
- If an important reading is identified, what should be the course of action?
- Can the system be extended to monitor more assets across the state?



AI Agents in Bridge Asset management

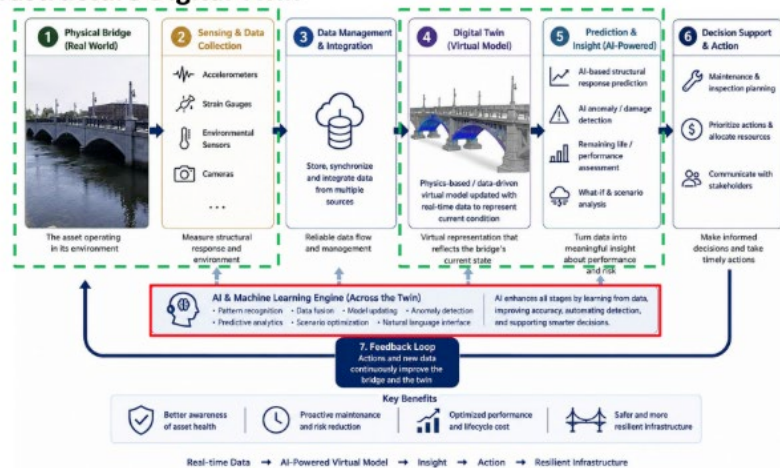
What

1. Relentlessly flag unexpected situations
2. Efficiently investigate the findings
3. Thoroughly ground in site observation

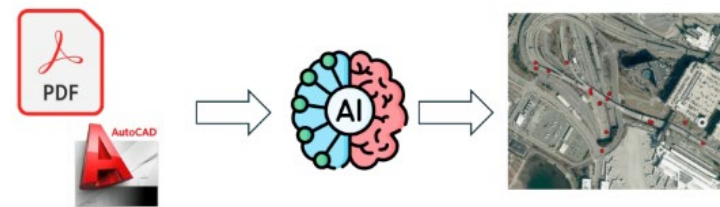
How

- By continuously analyzing data in layers bringing overwhelming data into actionable reports, communicating findings, human user decide action
- By assisting the human user in drilling down into the data, verifying findings, check for natural causes, human user decide action
- By comparing inspection reports and photos between years, match findings with sensor data, flag quality issues, human user decide action

Infrastructure Digital Twin



Convert documents to GIS Data



TAKEAWAY 1

Start with the problem, not the technology.

FHWA / USDOT ITS JPO framed it directly: agencies don't need help "enabling AI" for some future use — they need to know what real problems it can solve right now. RIDOT's own team echoed the same instinct.

TAKEAWAY 2

Adoption is the real bottleneck — not the technology.

Connecticut DOT put a number on it: roughly 200 enthusiastic early adopters out of 3,400 employees. The technology is largely ready; helping the rest of the workforce trust and use it is the harder, slower work.

TAKEAWAY 3

Token costs are becoming the new O&M line item.

Unbudgeted AI bills running \$200K–\$500K — in both public and private budgets. Vendors are now building token-estimation models, the same way agencies plan for the operating cost of a physical asset.

TAKEAWAY 4

Democratize the workforce — don't gatekeep it.

Cautioned against over-credentialing every role with narrow tech requirements. GIS staff are already doing data-scientist-level work; RIDOT's own team pointed out that curiosity and communication skills matter as much as a technical degree.

TAKEAWAY 5

Look past your own state — and your own country.

Reminder: the US doesn't have a monopoly on good ideas. The room heard directly from Austria and Norway, and referenced work underway in China, Singapore, and PIARC's 120+ member countries — a rare mix for a peer exchange this size.

LOOKING AHEAD

A Federated Home for What We're Learning

- **FHWA's AI Deployment Center of Excellence is building a national AI knowledge portal**

With USDOT and the ITS Joint Program Office — aimed at two-way, LLM-assisted knowledge exchange, not a static document library.

- **Designed as a partnership, not a single owner**

Likely federated across agencies, possibly hosted through AASHTO given federal publication constraints.

- **AASHTO, TRB, and ITS America each have a role as trusted synthesizers**

Different audiences go to different places — no single site will reach everyone.

LOOKING AHEAD

Keeping the Peer Exchange Going

- **“Who’s missing?” — FHWA’s question for sustaining the network**

Interest in a proper handoff to the next host region, and embedding AI topics into standing TRB and AASHTO committees.

- **Near-term touchpoints already on the calendar**

An AASHTO Committee on Performance-Based Management AI webinar, a TRB Annual Meeting international AI workshop, and the AASHTO Data Management & Analytics Committee business meeting.

- **Materials from this symposium**

Presentations will be posted to the symposium website; A conference-proceedings summary is being produced..

A CLOSING THOUGHT FROM THE ROOM

“Don’t boil the sea.”

Shared in the closing session as a favorite line from RIDOT leadership — a reminder to focus AI efforts on a few problems that matter, not everything at once.

SAVE THE DATE

Next up: a Peer Exchange on Digital Twins

Webinar Objectives

- **Explore** the challenges of agency rollouts and drafting comprehensive AI policies
- **Identify** opportunities to enhance system safety by instituting large-scale AI pilots
- **Highlight** strategies for managing workforce education on use cases *and* risks
- **Share** lessons learned, ideas, and knowledge!!

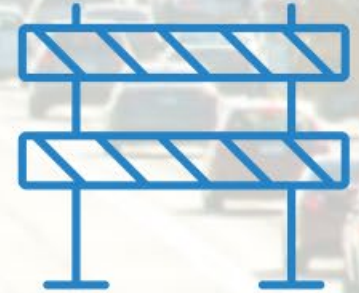


Webinar Agenda

- 2:02 AASHTO Welcome and RIDOT AI Peer Exchange Recap**
Anna McLaughlin, AASHTO
Christos Xenophonstos, Rhode Island Department of Transportation
- 2:15 Learning Objectives and Agenda**
Lori Richter, Spy Pond Partners
- 2:20 *Generative Artificial Intelligence (GenAI) in State DOTs***
Duper Tong, Caltrans
- 2:35 *Exploring AI at MnDOT***
Melissa Barnes, Minnesota Department of Transportation
- 2:50 AI's Impact on Iowa DOT**
Matthew Miller, Iowa Department of Transportation
- 3:05 Panelist Discussion**
- 3:25 Wrap Up**
Lori Richter

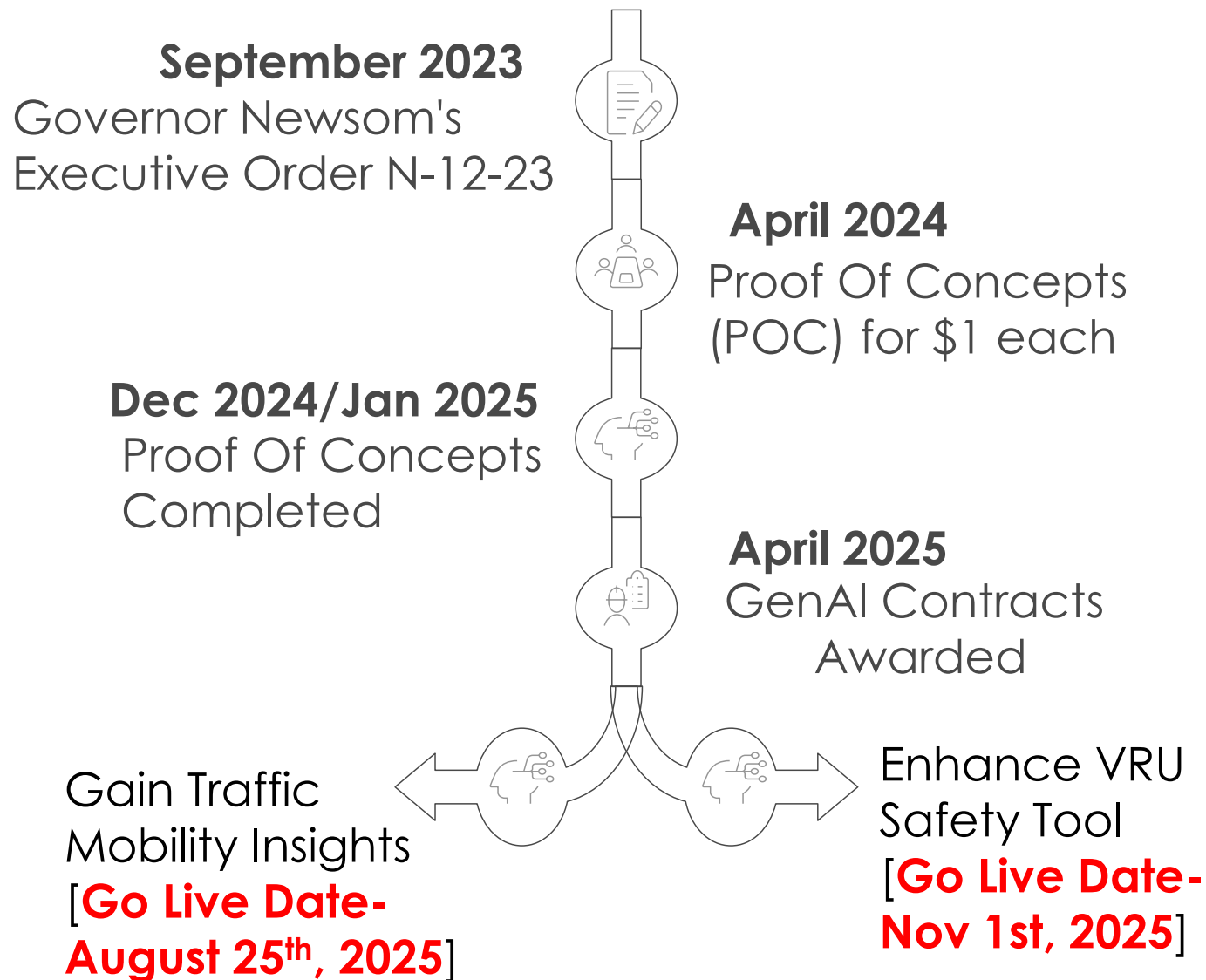


Generative Artificial Intelligences (GenAI) in State DOT



Duper Tong
Division Chief, Traffic Operations, HQ
CalTrans

GenAI Projects Overview



Gov. Newsome, April 29, 2025, Govt: Efficiency News
Conference in LA to Announce the Execution of the
GenAI Contracts

GenAI Projects Partners

AGENCY PARTNERS



STATE DEPARTMENTS



California Department of
Technology



CT PROGRAMS



DIVISION OF
SAFETY
PROGRAM



Labor
RELATIONS

ALL DISTRICTS

INDUSTRY



ChatGPT



ACCOMPLISHMENTS

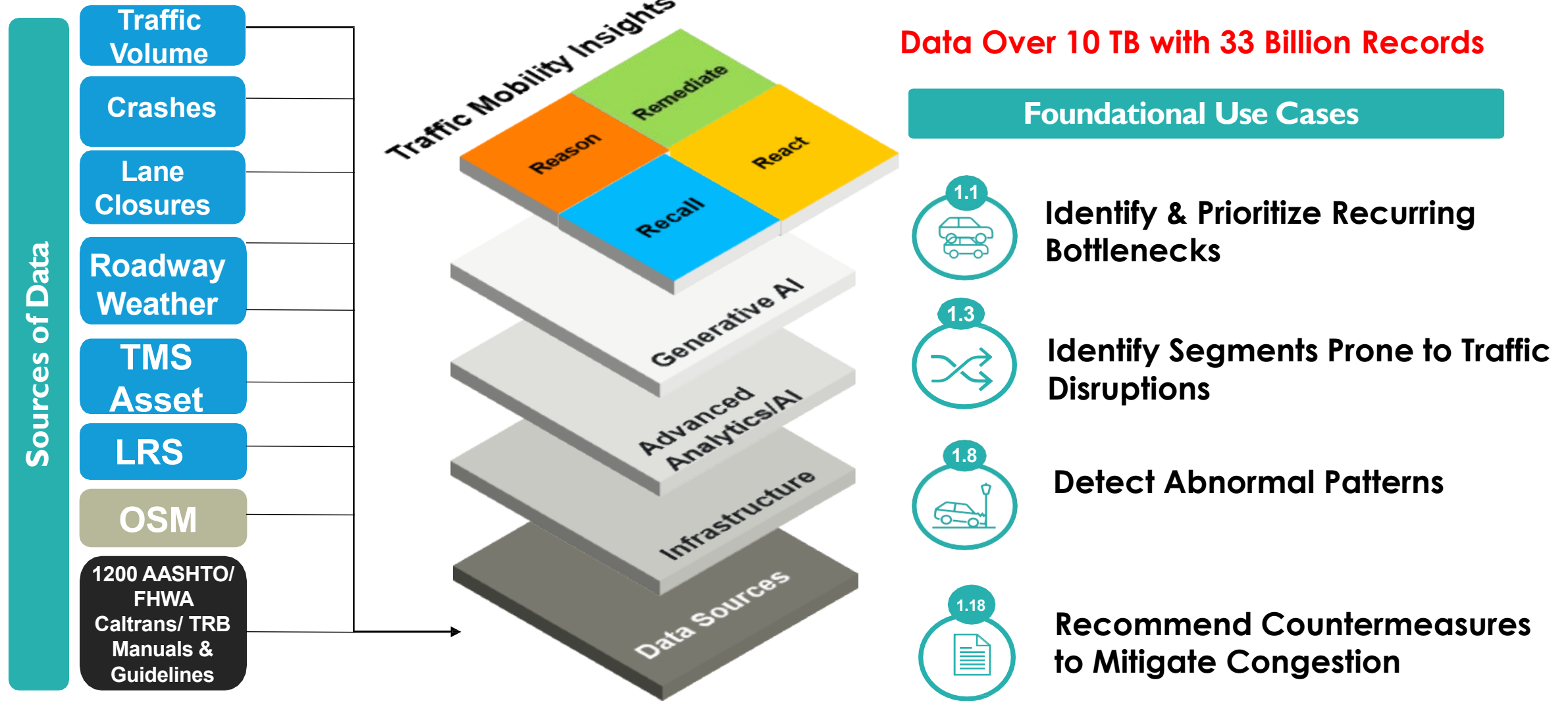


CA Transportation Foundation Awards 2026 for Road Safety Insights (RSI) platforms [Safety Project of the Year]



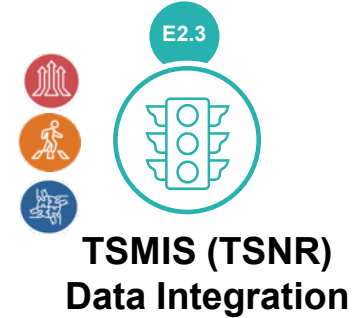
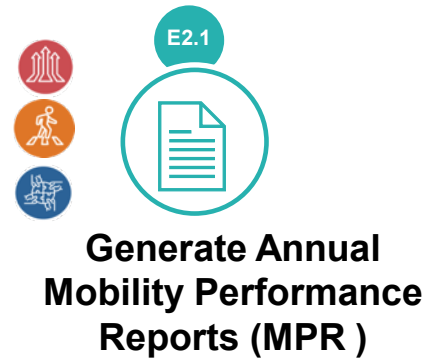
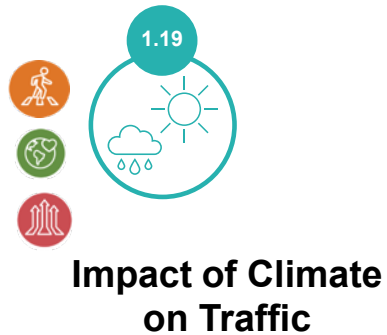
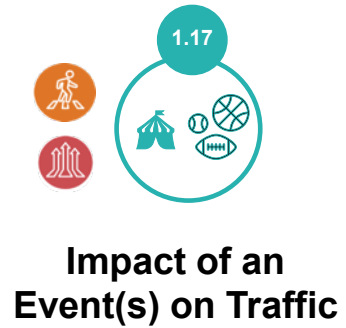
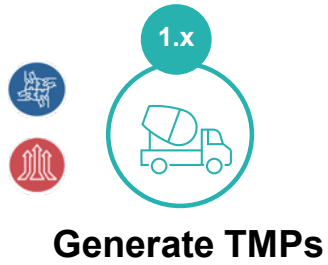
Public Sector CIO Academy Leadership Awards for our Traffic Mobility Insights (TMI) and Road Safety Insights (RSI) platforms

Generative AI Traffic Mobility Insights (TMI) Tool



GenAI TMI Efficiency Roadmap

FY 26-27 Use cases & Enhancements



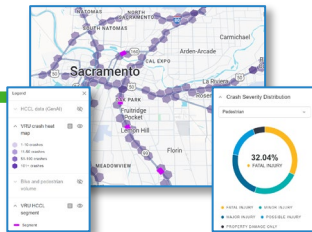
Generative AI Road Safety insight (RSI) Tool

Project
Enhancement

Use Case #1

1. Prioritize SHS Corridors for Infrastructure Enhancements
2. Identify Patterns of Systemic Factors
3. Facilitate Spatial Analysis & Integration

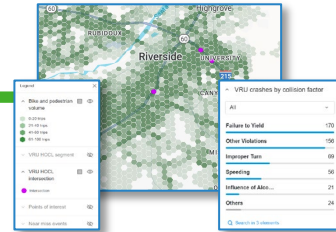
- ✓ Prioritize **systemic and reactive factors** across **multiple dimensions**, including equity, transit, lighting conditions, weather, etc.



Use Case #2

1. Prioritize SHS Ramp & Intersections for Infrastructure Enhancements
2. Identify Patterns of Systemic Factors
3. Facilitate Spatial Analysis & Integration

- ✓ Empower workforce with **instant access to expert knowledge**, enabling them to **identify patterns and provide informed recommendations**.



Use Case #3

1. Generate a VRU Safety Analysis Report
2. Provide Countermeasure Recommendations
3. Support Report Export & Visualization

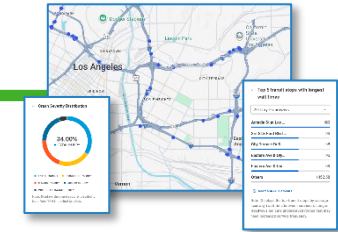
- ✓ **Generate VRU Safety Analysis reports in minutes** to recommend the most appropriate **VRU safety improvements at critical locations**.



Use Case #5

1. Prioritize transit stop enhancement locations, considering underserved communities
2. Recommend enhancements based on climate, transit data, and user needs.

- ✓ **Proactively identify** best locations for **transit enhancements** to enhance VRU safety



GenAI RSI Efficiency Roadmap

Live Data Connection to TSN-R

Connect RSI with TSN-R via an API to ingest and update crash data automatically.

Brings RSI tool in-line with Caltrans' system, enabling it to become an enterprise tool and strengthening trust, and expanded adoption.

Corridor-Level Analysis

Revise the prompt flow and analysis framework of RSI to enable users to spatially define corridors and areas for investigation and planning.

Provide a high-level corridor summary with the option to break down results by segment and sub-segment, maximizing RSI insights beyond single locations.

Hard Breaking Event (HBE) Analysis Integration

Creation of a HBE analysis data layer for inclusion in prompts, systemic score, and digests.

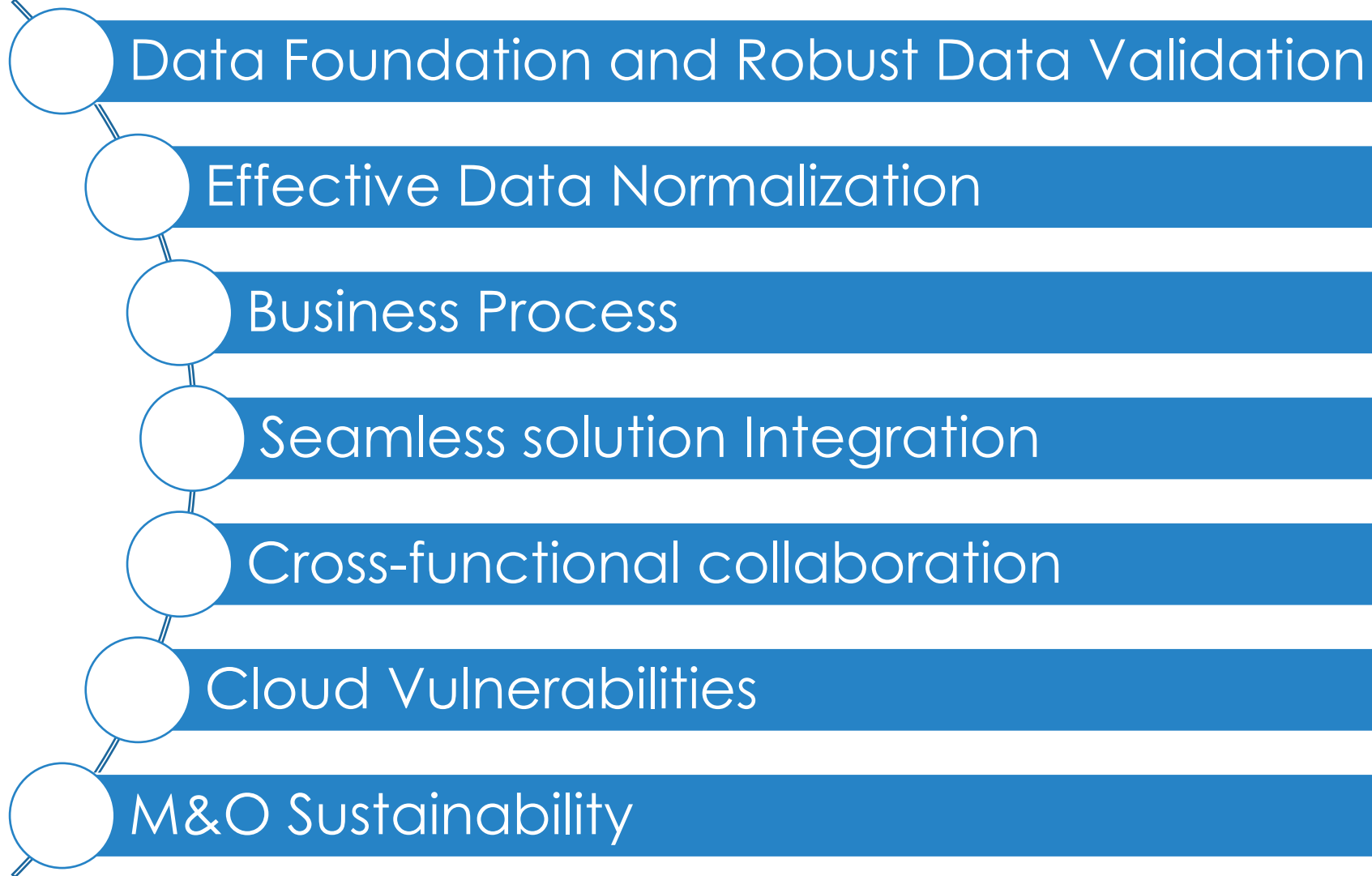
Provide an innovative, leading safety indicator to enhance Caltrans' systemic analyses and project identification.

Maintenance & Operations (M&O)

Extend M&O services for 12 months to include monthly M&O reports, defect resolution user support, bi-weekly code releases, and reporting support.

Continue to support RSI functionality, reliability, and performance during use.

GenAI Lessons Learned





Exploring AI at MnDOT

Melissa Barnes, PE | MnDOT Operations Division

AASHTO TPM Webinar, 8/26/26

Why AI matters now

- Rapidly reshaping abilities, expectations, and the way we work together.

Alignment with MnDOT's goals and objectives

- AI can align with our strategic goals
- AI poses risks within our strategic goals



**PROMOTE A
SAFETY CULTURE**



**ADVANCE
TRANSPORTATION
EQUITY**



**CHAMPION
SUSTAINABILITY
ACTIONS**



**MAXIMIZE
STEWARDSHIP OF
RESOURCES**



**FOSTER A THRIVING
WORKFORCE**

MnDOT's GenAI Standard

Released July 2025

Employees may not use LLM's other than state-provided CoPilot

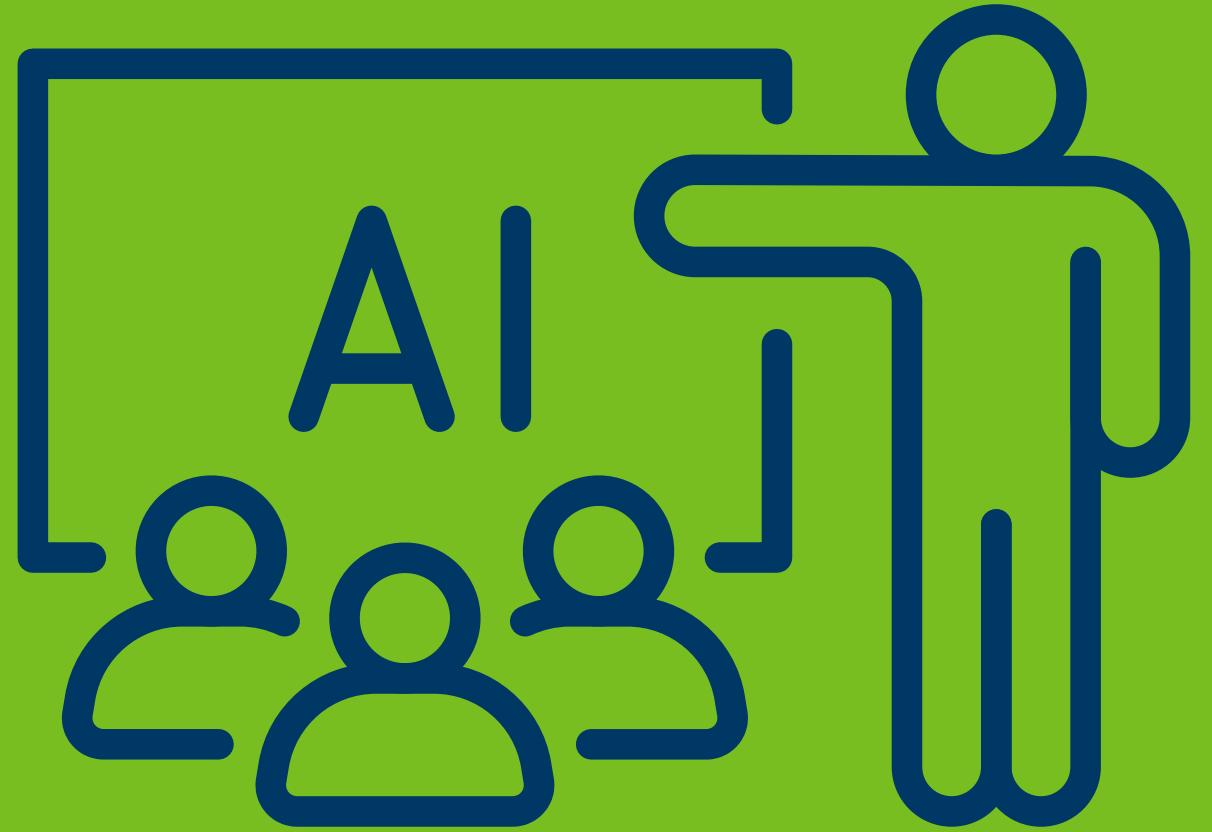
- Other programs need to be requested and approved.
- Private data can be put into state-provided CoPilot, which lives in the government community cloud.

Employees must practice responsible AI use – use AI as a supplement and not a replacement for human judgement. Check AI's work responsibly.

Consider citing AI when it is used to create information (not required)

Read here: <https://www.dot.state.mn.us/policy/it-data/it-003.html>

Education



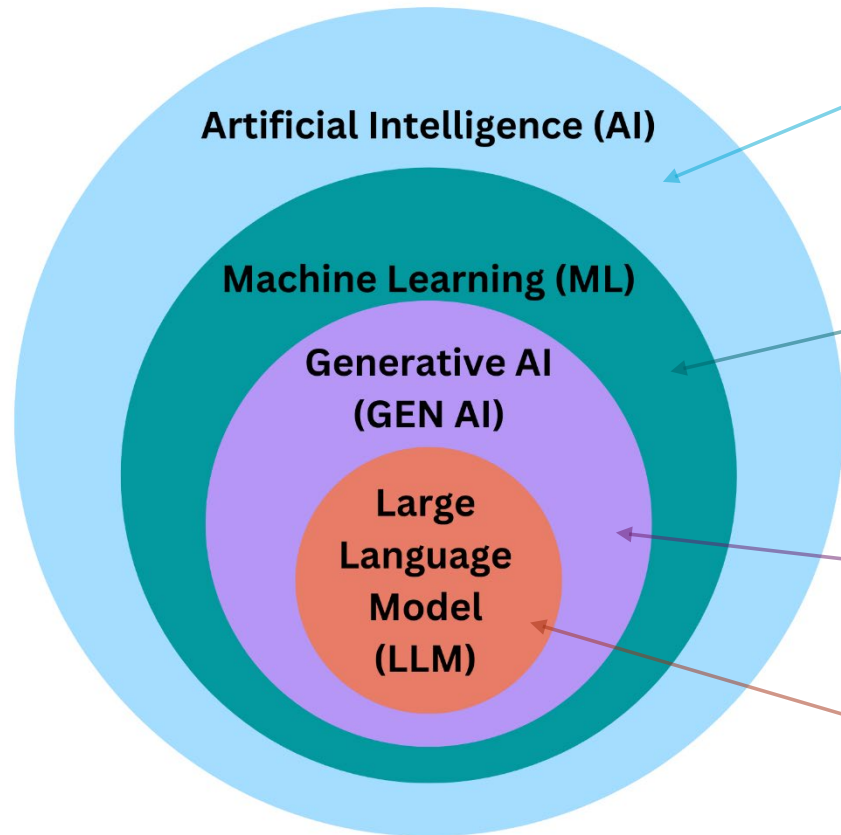
Foundational Engagement

Total MnDOT Copilot Training Courses and Attendees* for 2025

Copilot Courses		Class Sessions	Division									
COURSE_CODE	NAME	Classes Held	Chief Counsel	Chief Financial Officer	Chief Of Staff	Commissioners Office	Engineering Services Div	Operations Div	State Aid For Local Trans Div	Sustainability, Planning And Program	Workforce And Agency Services Div	Grand Total
COMP00190	COPILOT CHAT 101: INTRODUCTION TO COPILOT CHAT AT MNDOT	8	9	42	17	22	118	342	13	71	90	724
COMP00191	COPILOT 101: SUMMARIZING AND EXPLAINING CONTENT	3		2	1	2	12	22	1	7	17	64
COMP00192	COPILOT 101: DRAFTING, EDITING, AND REWRITING TEXT	3		4		1	15	40	2	6	22	90
COMP00193	COPILOT 101: CREATIVE AND ADVANCED USE CASE	3		2	1	2	12	44		6	15	82
COMP00194	COPILOT 101: ASKING QUESTIONS AND PROMPTING BASICS	4		4	1		16	26	1	10	25	83
COMP00195	COPILOT 101: GETTING STARTED WITH COPILOT CHAT	4	1	4	2	1	22	35	1	12	22	100
Grand Total		25	10	58	22	28	195	509	18	112	191	1,143

* Note: Employees are counted as an attendee each time they complete a training class. The number of individual employees attending at least one training class is 766.

Just a Piece of the Puzzle



i Any technique which enables computers to mimic human behavior.

Examples: routing, scheduling, prediction

i AI techniques that rely on algorithms designed to learn from data without being explicitly programmed.

Example: email spam filter

i AI techniques capable of generating text, images, or other media.

i Like ChatGPT, CoPilot, Deepseek, Perplexity, and more!

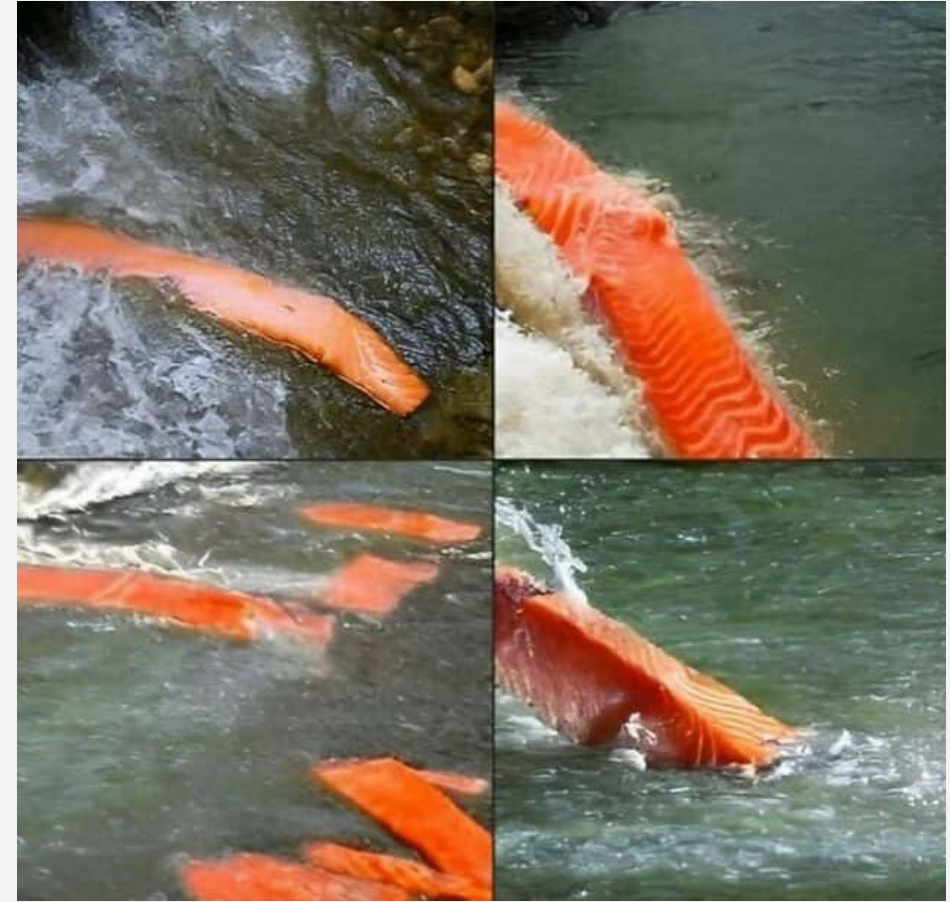
Exploring AI at MnDOT

- Smart traffic control and congestion management
- Predictive maintenance
- Infrastructure monitoring and inspection (potholes by cell phone, Lidar assets)
- Estimating
- Maintenance parts tracking
- Scheduling/routing
- Crash safety analysis



Risks and Challenges

- **Bias and fairness**
 - AI trained on skewed data
- **Transparency**
 - Understanding how AI makes decisions
- **Privacy and data security**
- **Workforce impact**
 - Automation vs. augmentation
- **Regulatory gaps**
- **Errors and learning how to use AI – be skeptical!**
- **Environmental impact**



The AI prompt was “Salmon in the river”
So majestic.

Pilot Projects



Approach to Piloting AI Projects



Idea Generation (July-October 2025)

National scan, staff suggestions, survey



Prioritization (November 2025-January 2026)

Based on data readiness, alignment with mission, team capacity



Pilot Implementation (Ongoing)

Funded small-scale projects



Evaluation

Learn what works and share results

Survey Purpose: Why MnDOT is exploring AI

Background education

Section 1:

- Role, familiarity, and perception of AI

Section 2:

- Current uses of AI, use case ideas, challenges with AI

Section 3:

- Examples from around the country

Survey Results - Overall Thoughts on AI

Many employees see high value with AI assistance

- MnDOT should responsibly integrate technological advances like AI, not fall behind

Training & change management needs

- Basic AI training and guidelines
- Hands-on workshops
- Gradual adoption

Others highlighted downside risks

- Concerns about environmental impacts, water usage
- Concern about accuracy of AI outputs, plagiarism, bias and security risks
- Concern employees without strong technical expertise will rely too much on AI
- Concerns about skill deterioration

Survey Results – Employee-Identified AI Needs



General Admin
Support



Language and
Communication



Policy
Compliance



Routine
Workflow
Support



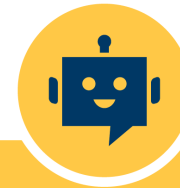
Resource
Optimization



Data Analysis



Field Support



Chatbots



Mandatory Criteria

Represent the basic screening criteria that any AI pilot must meet to be considered

CRITERIA INCLUDE:

- Alignment with MnDOT transportation goals
- Regulatory & legal compliance
- Privacy & data protection
- Cybersecurity risk
- MnDOT technical & IT readiness





Core Pilot Evaluation Criteria

Help sort the pilot ideas into different ranking buckets

CRITERIA INCLUDE:

- Safety & operational risk
- Transparency & bias
- Data quality
- Start-up cost & quick wins
- Performance of similar AI pilots





Post-Pilot Evaluation Criteria

- Data collected during the pilot; focuses mostly on employee experience
- Help determine if MnDOT pursues wider implementation

CRITERIA INCLUDE:

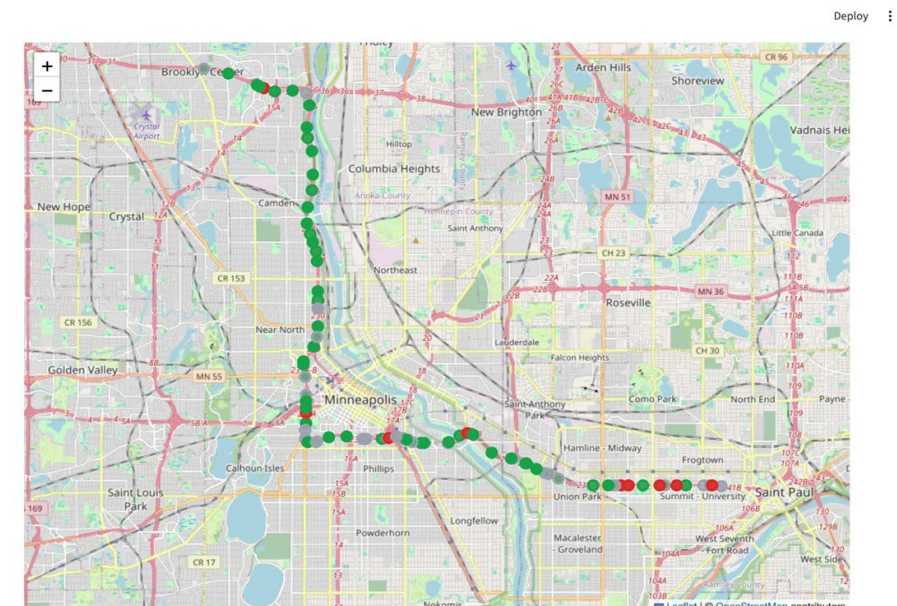
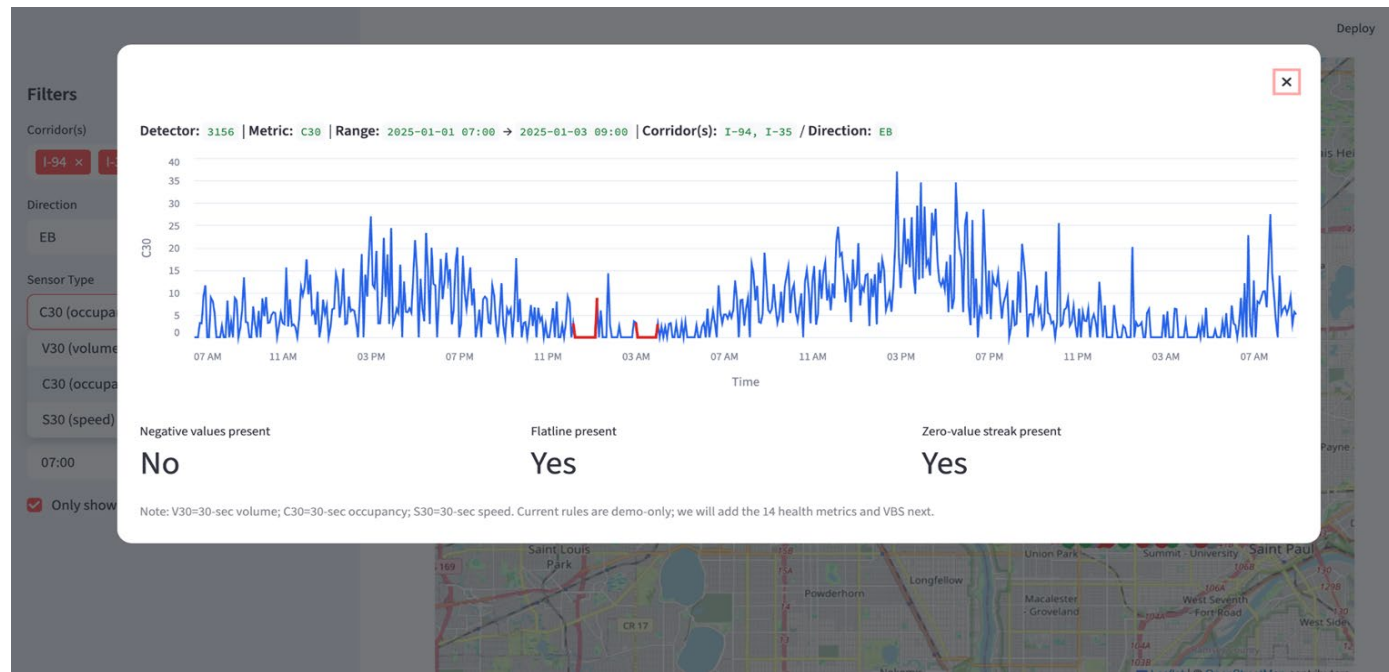
- Efficiency & productivity gains
- Staff experience & morale
- Impact on essential human skills
- Training & onboarding ease
- Change management readiness
- Communication clarity
- Operational sustainability & maintenance burden



Sample Pilot Project - Detector Data

Automatic fault detection for traffic detectors

- Detector aging, calibration drift, environmental factors, and hardware failures all produce errors
- AI is able to automatically identify faulty detectors, alerts owners via an interactive corridor map, and allows us to provide more reliable traffic management.



Next Steps



Momentum and Challenges

Change Management

- Providing light structure, leadership involvement, empowering passionate people
- Meeting people where they're at
- Focus on process improvement with new opportunities, not jumping to AI as a solution without identifying the problem

Challenges

- Limited time
- Legal concerns and risk
- Whose job is it?
- Unclear immediate value

Next Steps

- Roadmap and Resources Document
- In progress
 - Sharepoint created
 - Lunch and learns planned
 - Champions Group – implementers, point of contact
 - External sharing through peer exchanges, conferences, local agency coordination, vendors

Thank You!

Melissa Barnes, PE
Melissa.barnes@state.mn.us

AI's Impact on Iowa DOT

August 26th, 2026

Matthew Miller, CPM

Director of New and Emerging Transportation Technologies
Iowa Department of Transportation

Navy Veteran Operation Enduring Freedom on the
USS Theodore Roosevelt CVN-71.

Study Champion for Connected Corridors
Advancement Initiative and former study champion
for BIM for Infrastructure Pooled Fund Studies.

Former Chair, AASHTO COC Innovative Construction
Technologies Subcommittee, e-Construction
Program Administrator, Construction Supervisor,
Auditor, Inspector, TTCP instructor for DMACC, and
contractor employee.

Graduate of the Certified Public Manager program
at Drake University. Drone Pilot.



Artificial Intelligence at the Department

Developing an AI Strategic Plan.

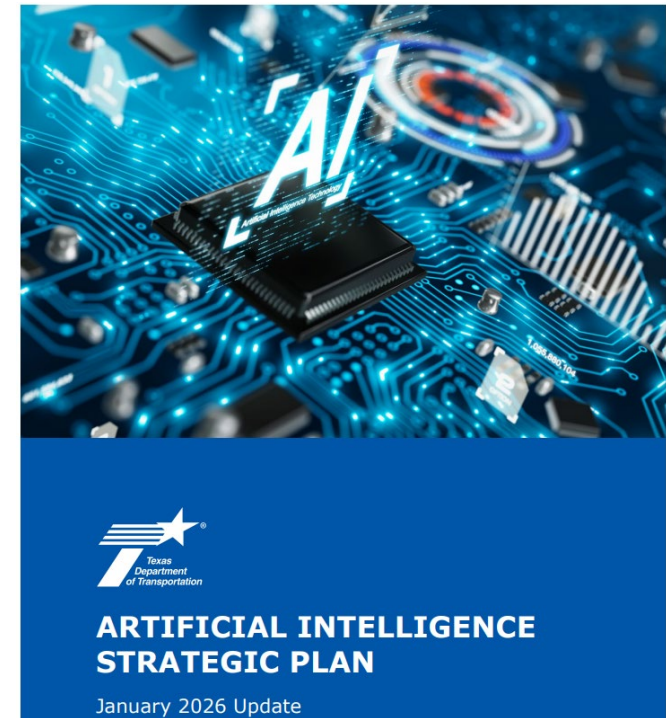
The draft was written and is currently being evaluated.

Enlisting help from consultants.

TxDOT AI Strategic Plan from late September already has an update.

We want to:

- Ensure alignment with our Business Plan.
- Avoid multiple update cycles.



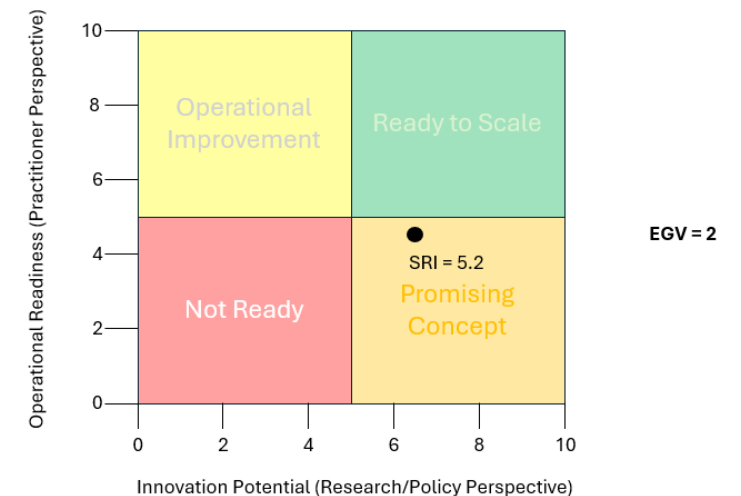
Artificial Intelligence at the Department

Survey responses are used to calculate two indicators: the **Scalability Readiness Index (SRI)** and the **Expectation Gap Value (EGV)**.

SRI represents the weighted relationship between *innovation potential* and *operational readiness*.

EGV represents the difference between innovation potential and operational readiness and serves as a sensitivity indicator of alignment between researchers, policymakers, and operational practitioners.

Together, these indicators provide a structured view of whether an innovation is ready for scaled implementation or requires further development.

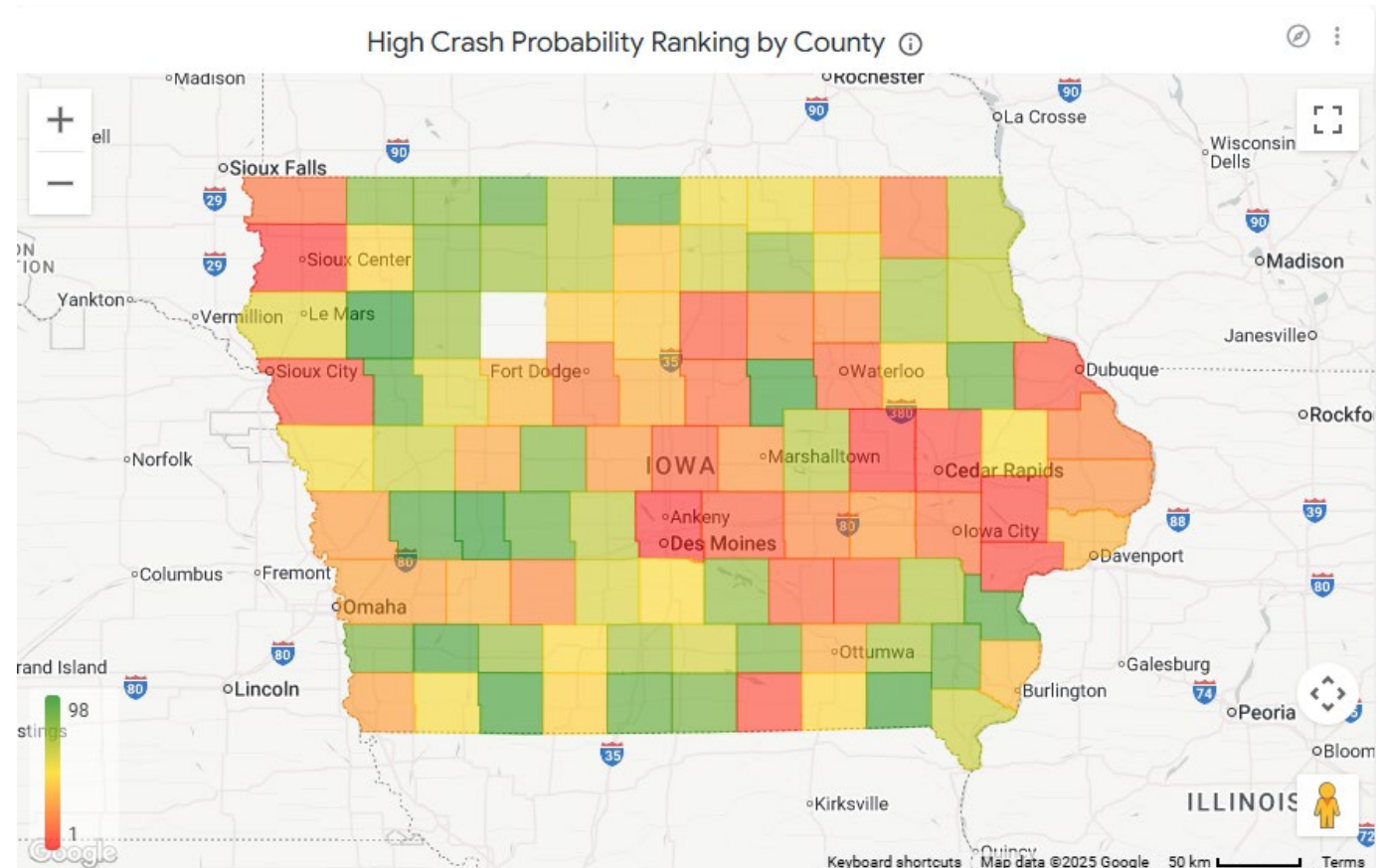


Crash Prediction Tool

Statewide data to “predict” crashes and severity.

Utilized multiple datasets including EINs, INRIX, Wejo, Streetlight, weather, etc.

No feedback loop or verification on prediction.

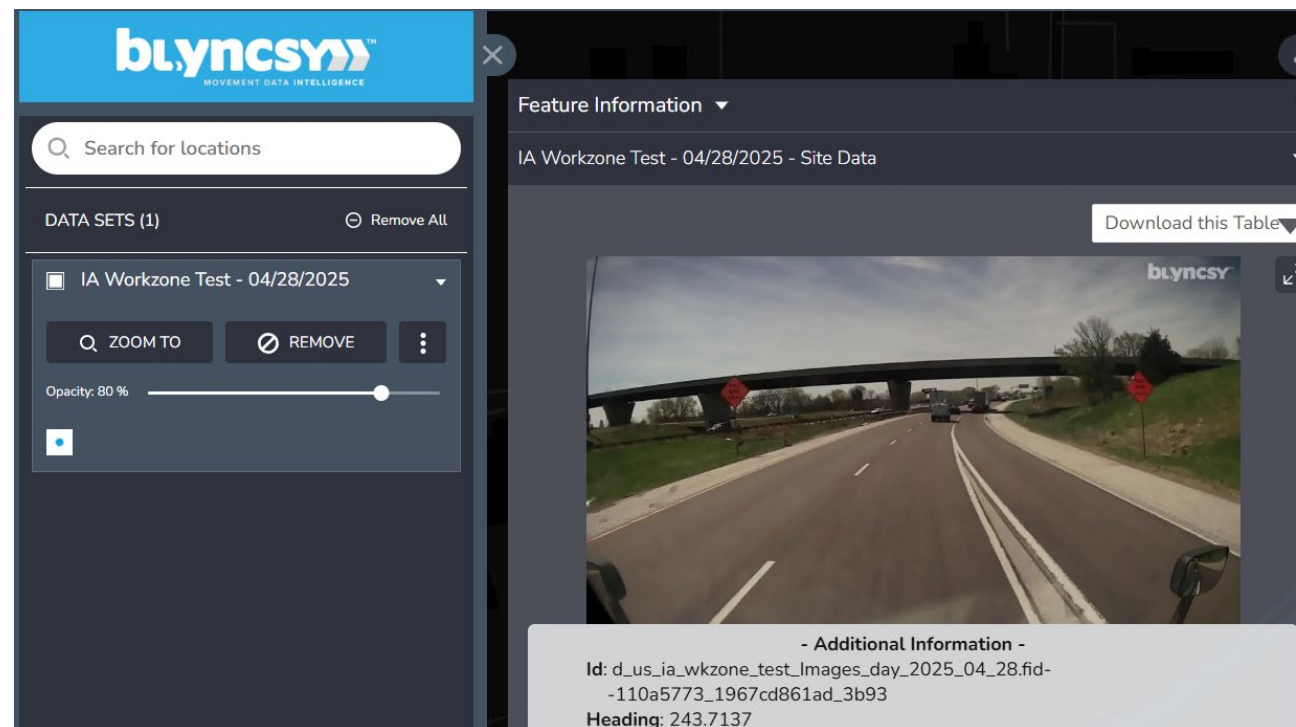


Blyncsy Pilot

Utilized Bentley Blueprint Credits for work zone detection leveraging the WZDx feed to limit area.

Test Haul Route before/after streamlining

MIRE 2.0 adaption testing.



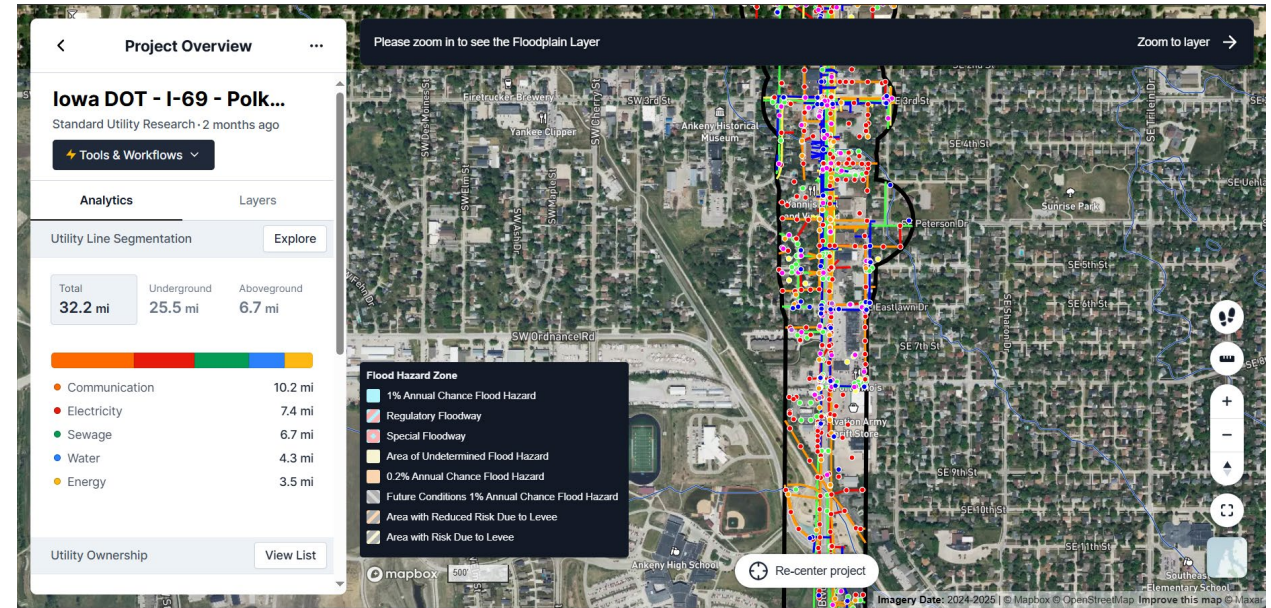
```
{
  "road_event_feed_info": {
    "publisher": "Iowa DOT",
    "version": "4.0",
    "data_sources": [
      {
        "data_source_id": "IowaDOT-WZDx",
        "organization_name": "Iowa DOT"
      }
    ],
    "update_date": "2025-06-24T13:07:40Z",
    "type": "FeatureCollection",
    "features": [
      {
        "id": "OpenTMS-Event17796193595",
        "type": "Feature",
        "properties": {
          "core_details": {
            "event_type": "work-zone",
            "data_source_id": "IowaDOT-WZDx",
            "road_names": [
              "US-6"
            ],
            "direction": "eastbound",
            "description": "Between IA 28 and IA 415 (Des Moines). Road construction. Intermittent lane closure. Starting today at 9:00AM CDT until November 15, 2025 at about 5:00PM CDT. Full schedule below: \u2022 March 10, 9:00AM - November 15, 5:00PM",
            "update_date": "2025-03-10T13:28:23Z",
            "start_date": "2025-03-10T14:00:00Z",
            "end_date": "2025-11-15T23:00:00Z",
            "start_date_accuracy": "estimated",
            "end_date_accuracy": "estimated",
            "beginning_accuracy": "estimated",
            "ending_accuracy": "estimated",
            "beginning_cross_street": "6E-135.2",
            "ending_cross_street": "6E-136.4",
            "beginning_milepost": 135.2,
            "ending_milepost": 136.4,
            "vehicle_impact": "all-lanes-open",
            "types_of_work": [
              {
                "type_name": "surface-work"
              }
            ],
            "lanes": [
              {
                "order": 1,
                "type": "shoulder",
                "status": "open"
              }
            ]
          }
        }
      }
    ]
  }
}
```

4M Pilot

Uses AI to scrub available web data like permits, 811 requests.

Satellite imagery evaluated by AI to identify utilities in Right of Way.

Used on 2 projects. Interesting results. Data availability gaps.



e-Ticketing AI

- E-Ticketing daily diaries
- Photo descriptions
- Sampling frequencies
- Material analysis

Experiment with a variety of language models, and fine-tune them to meet your application requirements

Choose File Objects (5)

Selected File: Concrete_Requirements_AI_test.pdf, DWR_AI_test.pdf, FULL_DAY_Ticket_H.002868_02012024_1448PM_.pdf

one of the documents is the requirements for the batch weights on concrete tickets. one document is the requirements for a DWR (Daily work report). the other document is a collection of tickets for concrete loads for construction jobs. each load will have a corresponding ticket number. please write me a DWR for the day based on the requirements.

Start Analyzing (ChatGPT v4(0125 preview)) Edit Context

****Daily Work Report (DWR) for February 1, 2024**:** --
--**Project:** ** H.002868 US 90 EAST
--**Contract Number:** ** 2203-P07
--**Customer:** ** JB JAMES CONSTRUCTION, LLC
--**Supplier:** ** PAI Ready Mix, LLC
--**Plant Name:** ** LAFAYETTE AIRPORT
--**Summary of Materials Delivered:** **
- **Total Concrete Delivered:** ** 189 cubic yards
- **Total Number of Tickets:** ** 21 (1 Voided, 20 Delivered)
- **Total Water Added on Site:** ** 461.74 gallons
--**Batch Weight Tolerances:** **
- **Cement:** ** 2 tickets outside tolerance (Ticket Nos. 52074502 and 52074509).
- **Slag:** ** 3 tickets outside tolerance (Ticket Nos. 52074507, 52074511, and 52074518).
- **Sand:** ** 4 tickets outside tolerance (Ticket Nos. 52074505, 52074503, 52074501, and 52074504).
- **Gravel:** ** 1 ticket outside tolerance (Ticket No. 52074502).

Slow Moving Vehicles

200 crashes a year. 7-8 fatalities.
Approximately \$55 million in costs annually.

\$11 Billion Nationally.

Tested doppler sensor, reprogrammed,
connected weather data set and produced sign
activation.

We have shown potential to scale.



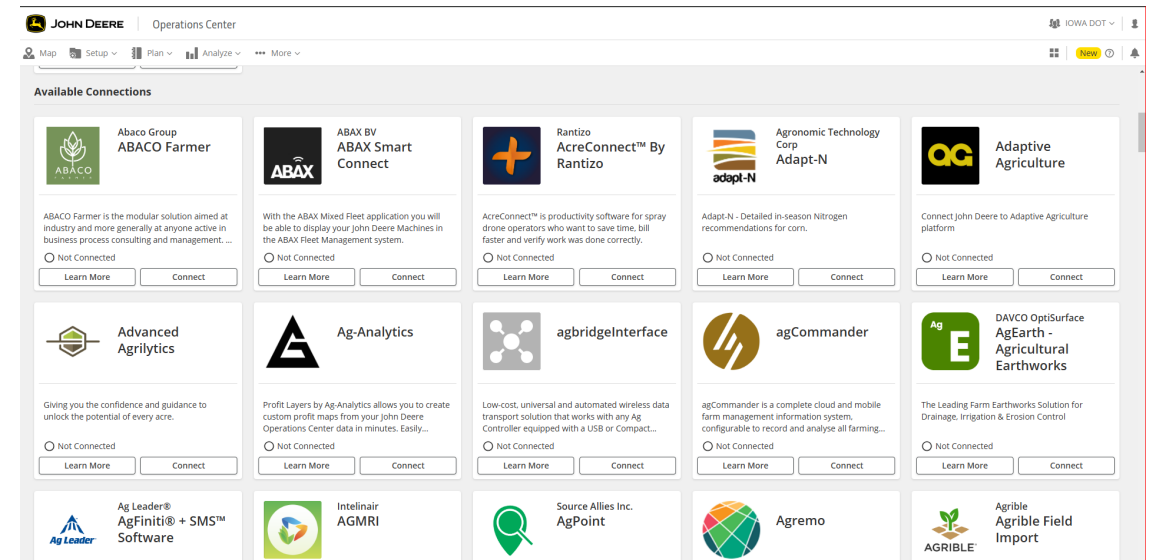
Slow Moving Vehicles

John Deere Operations Center has 3rd party apps to share data.

We connected CASE, New Holland and International as well.

10-minute latency was the limiting factor.

Conversations between GIS teams and John Deere stalled.



Slow Moving Vehicles

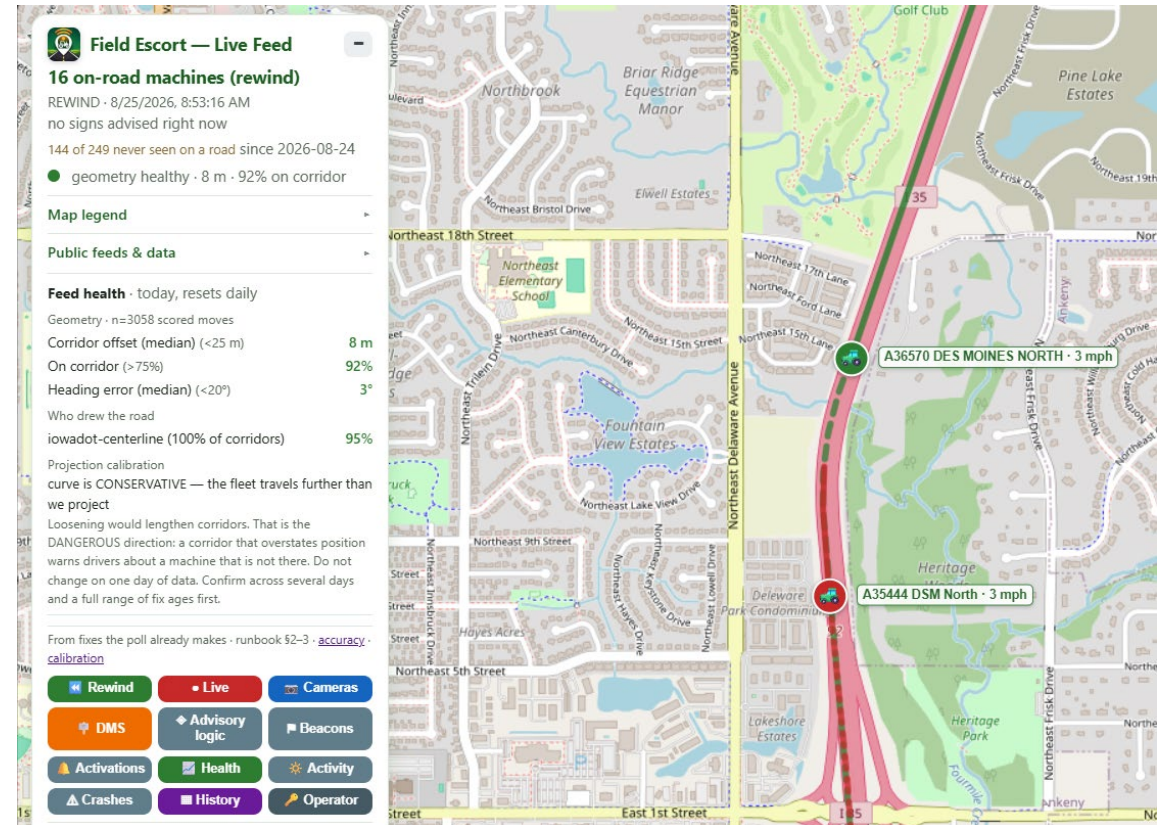
AI was used to solve the problem.

Haversine projection produces modified WZDx every 60 seconds.

Using logic attached to the equipment, we can look for DMS boards behind the equipment, match route, match direction and create a JSON activation.

Machine observations and count/ crash history/ line-of-sight determine where flashing beacons can be installed.

Transferring over to ISU, to finalize.

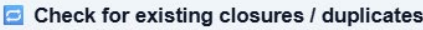


Closure request form

Created a self-contained request tool

- National Bridge Inventory clearances
- Highway Performance Management System
- Cameras, DMS, connected arrow boards
- Polyline route snapping- extensible to WZDx.


CARS 511 Work-Zone Request Builder
 Mark the road → auto-fill road/county + NBI clearances → schedule & detour → fill the official 511 PDF. Review



⚠ **1 existing 511 closure(s)** already on this segment — avoid a duplicate:

- I-80: Starts Monday August 26. I-80: Road Constructi — [load & extend](#)

Tap [load & extend](#) to update an existing one, or keep filling to file a new request.

STEP 2 · LOCATION & DETAILS

Route
I-80

Direction
Eastbound

DOT project # (type to search — last 3 yrs + programmed)
IM-080-3(185)127--13-77

Intelligent Work Zone?
No

[find near segment](#) · [+ import CSV](#) · [clear imported](#)

2 project(s) near this segment — tap a number to use it:

- [IM-080-3\(185\)127--13-77](#) [letting · letting FY2020] Traffic Signs — Douglas Ave to E of 100th St i
- [15-77-080-060](#) [5-year · 2027 program] Grade & Pave — University Ave to N of Douglas

Project description
Traffic Signs

Begin location (cross-street / MP)
MP 127

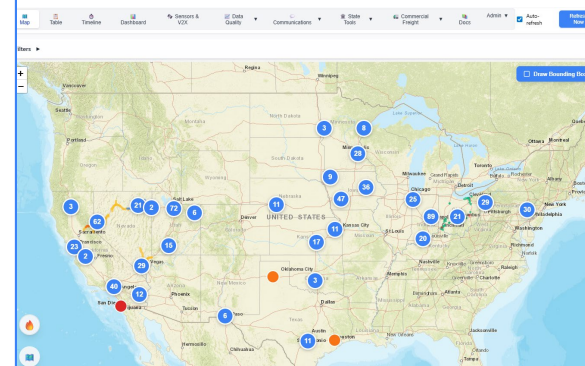
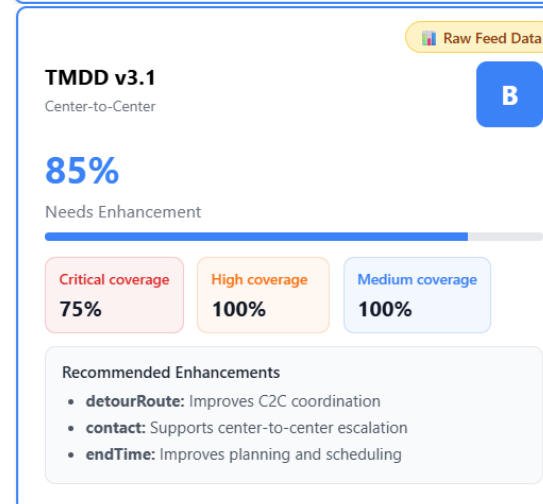
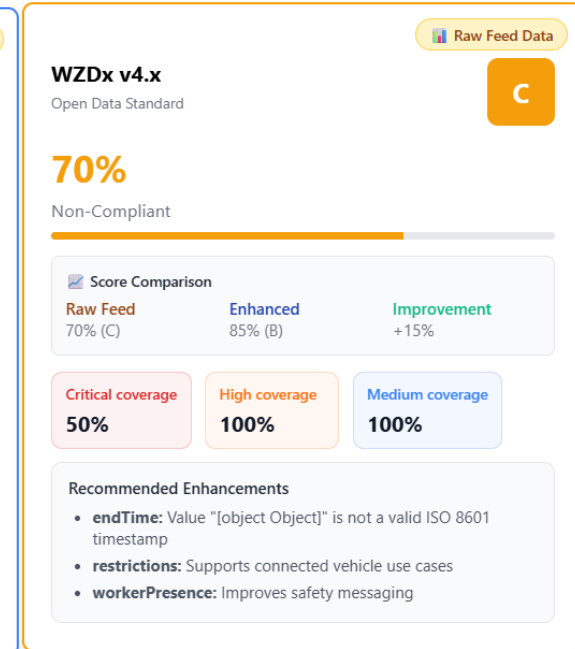
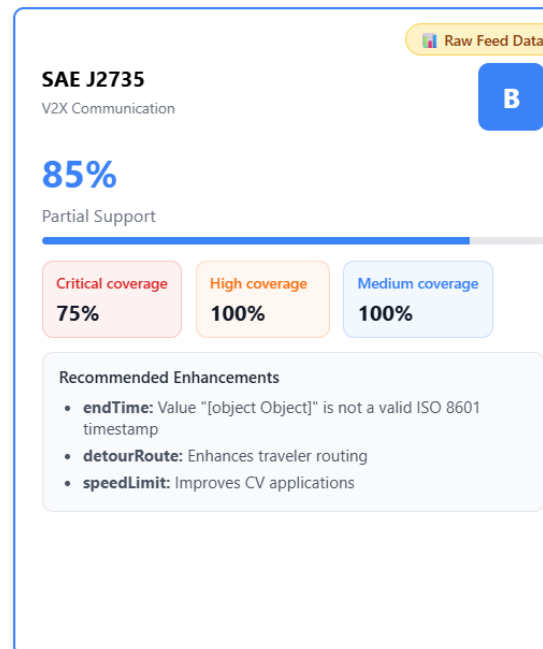
End location (cross-street / MP)
MP 129



Closure request form

What It Does:

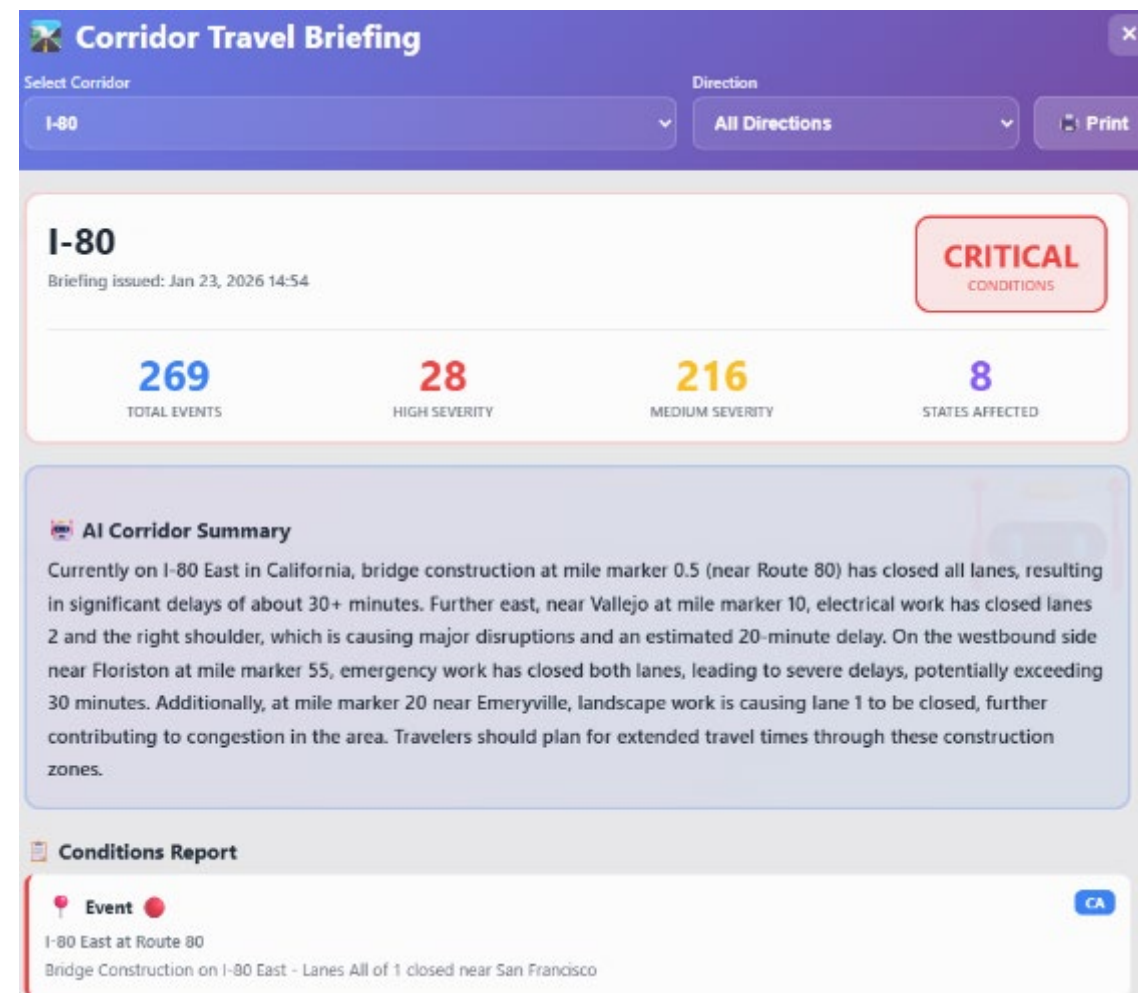
- Aggregates data from state DOT APIs in real-time
- Publishes standardized compliant feeds for commercial consumption
- Accepts contributed data from commercial providers (probe data, incidents)
- Tracks data provenance and assigns a confidence score.



Proof -of -concept tool

Summarize corridor events like a pilot's briefing before a flight.

Corridor Travel Briefing could be a communication tool with long-haul commercial vehicles.

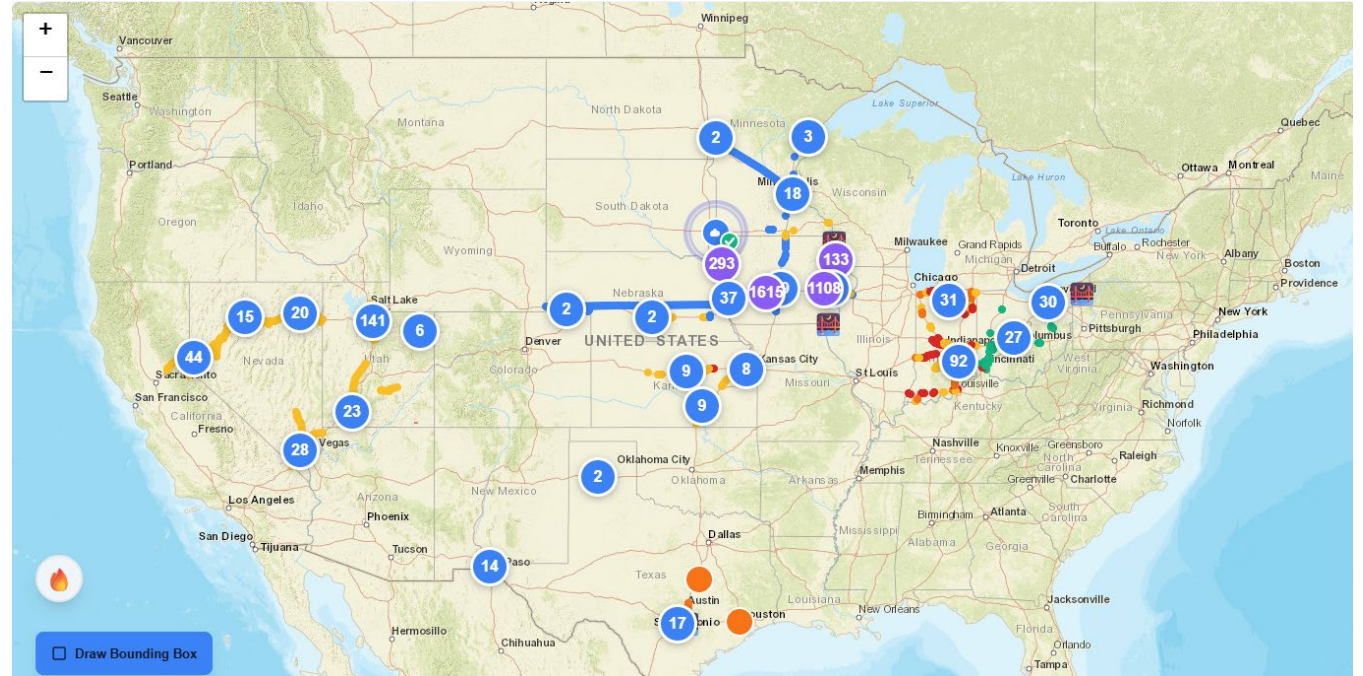


Proof -of- concept tool

Events, devices, pertinent asset data in one location.

Two-point geometries snapped to proper road poly-lines.

Output feeds in SAE-2735 and CIFS format.



Proof -of -concept tool

BIM/CADD/GIS Asset data
extraction for operations data.

Including:

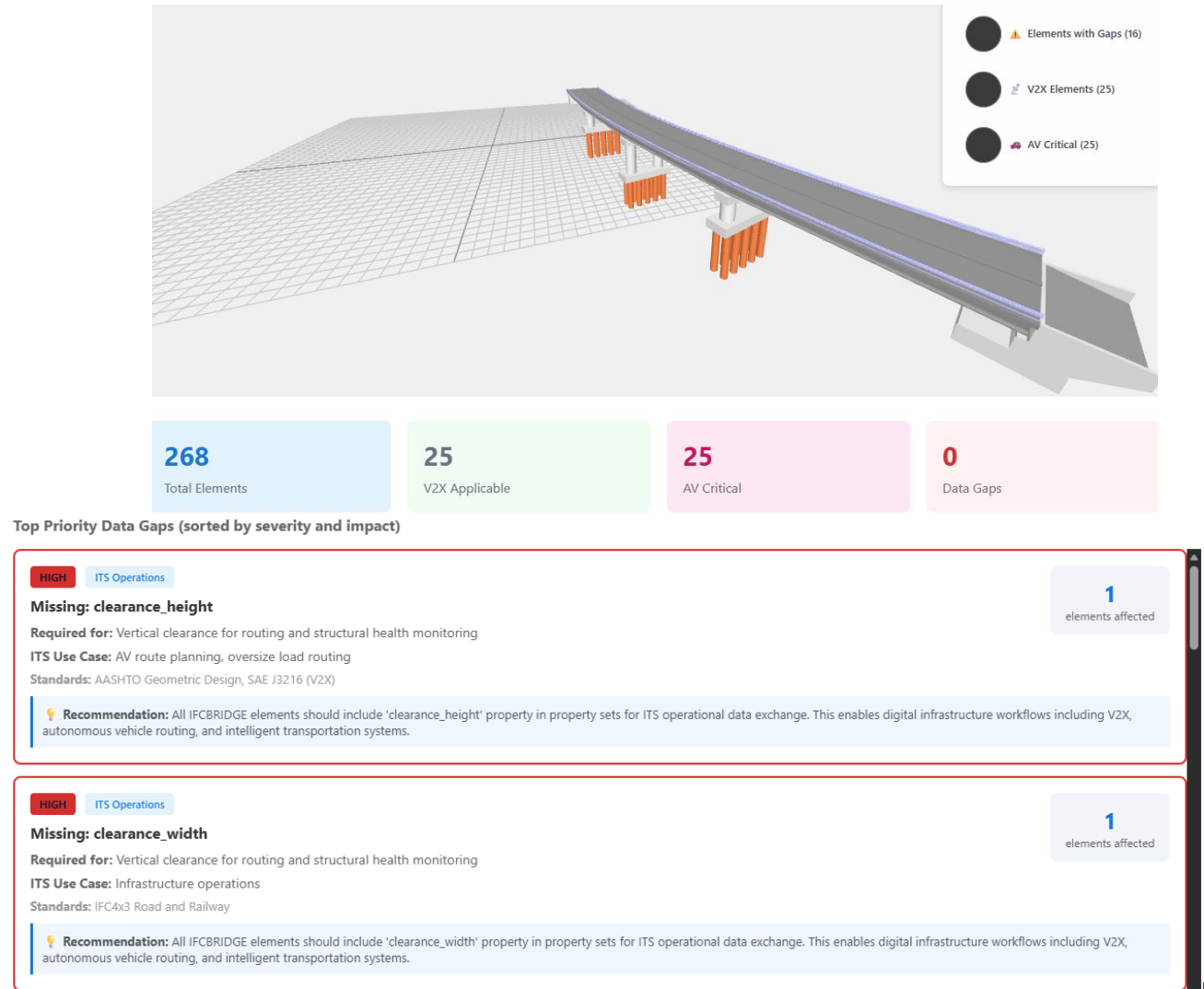
Vertical/ Horizontal Clearance

Load capacity

Pavement Widths

Markings and Signs

Functional class/ Asset ID



What's missing?

- Ground truth sampling.
- Bidirectional data exchange.
- Artificial Intelligence needs to prioritize data based on quality.
- Quality historical data for algorithm design and improvement.
- Complete ITS Architecture.
- Long-term operations and maintenance funding.

Live Camera

Center

1:42 2026-01-05

RA180EB300-01

Center

Entry

Exit

Manually count trucks visible in the parking area

Model Prediction

Occupancy

65%

Available

7

Occupied

13

Capacity

20

Confidence

Low

Today's Predicted Busy Hours

12am 6am 12pm 6pm 11pm

Current hour: 16:00

Get AI Count

Multi-Camera Consensus (3 views)

Occupied Spaces:

Occupied

Total Capacity (optional):

Total capacity

Submit

Enter occupied and total capacity. AI button fills both fields automatically.

Thank you



*for electronic
contact information*

Matthew Miller

DIRECTOR OF NEW AND EMERGING
TRANSPORTATION TECHNOLOGIES
SYSTEMS OPERATIONS DIVISION

800 Lincoln Way
Ames, IA 50010

📞 515-233-7843

📱 515-231-3980

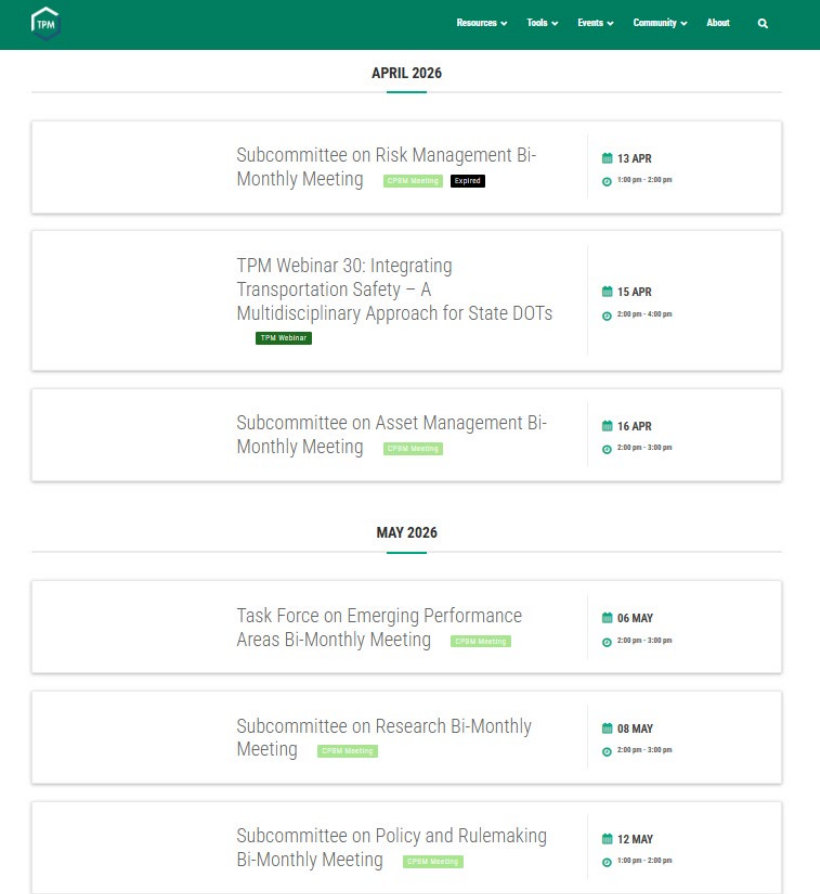
✉️ matthew.miller@iowadot.us

www.iowadot.gov

Save the Date!

- To learn more about the Committee on Performance Based Management, access the series archive, and explore performance management resources, visit the [TPM Portal](#)
- Join us for an upcoming webinar!
 - **TPM Webinar 33**
 - October 21st, 2026
 - **TPM Webinar 34**
 - December 16th, 2026
 - Make sure to register for the CPBM Annual Business meeting!
 - October 6th – 8th, 2026

Thank you!!



The screenshot displays the TPM Portal's calendar interface. At the top, a dark teal header contains the TPM logo and navigation links: Resources, Tools, Events, Community, and About. Below the header, the calendar is organized by month. The 'APRIL 2026' section lists three events: a Subcommittee on Risk Management Bi-Monthly Meeting (labeled 'CPBM Meeting' and 'Expired') on April 13, a TPM Webinar 30 on April 15, and a Subcommittee on Asset Management Bi-Monthly Meeting (labeled 'CPBM Meeting') on April 16. The 'MAY 2026' section lists three events: a Task Force on Emerging Performance Areas Bi-Monthly Meeting (labeled 'CPBM Meeting') on May 6, a Subcommittee on Research Bi-Monthly Meeting (labeled 'CPBM Meeting') on May 8, and a Subcommittee on Policy and Rulemaking Bi-Monthly Meeting (labeled 'CPBM Meeting') on May 12. Each event entry includes the event title, a date icon, the date, and a time range.

Month	Event	Date	Time
APRIL 2026	Subcommittee on Risk Management Bi-Monthly Meeting	13 APR	1:00 pm - 2:00 pm
	TPM Webinar 30: Integrating Transportation Safety – A Multidisciplinary Approach for State DOTs	15 APR	2:00 pm - 4:00 pm
	Subcommittee on Asset Management Bi-Monthly Meeting	16 APR	2:00 pm - 3:00 pm
MAY 2026	Task Force on Emerging Performance Areas Bi-Monthly Meeting	06 MAY	2:00 pm - 3:00 pm
	Subcommittee on Research Bi-Monthly Meeting	08 MAY	2:00 pm - 3:00 pm
	Subcommittee on Policy and Rulemaking Bi-Monthly Meeting	12 MAY	1:00 pm - 2:00 pm