



GenAI at CALTRANS

CTC | OCTOBER 16-17, 2025



GenAI AT CALTRANS

Executive Order Response

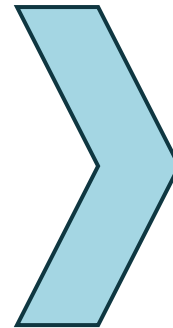
EXECUTIVE DEPARTMENT
STATE OF CALIFORNIA

EXECUTIVE ORDER N-12-23

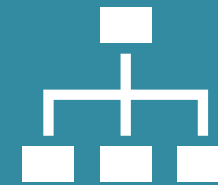
WHEREAS the State of California is a global leader in innovation, research, development, human capital, and entrepreneurship; and

WHEREAS Generative Artificial Intelligence ("GenAI") represents a significant leap forward in technology, by generating novel text, images, and other content, which will transform the way that the State and the world conduct business and serve the public; and

WHEREAS GenAI has the potential to catalyze innovation and the rapid development of a wide range of benefits for Californians and the California economy, such as advances in medicine, wildfire forecasting and prevention, and climate science, and to push the bounds of human creativity and capacity; and



Use Cases



Data and
AI Office



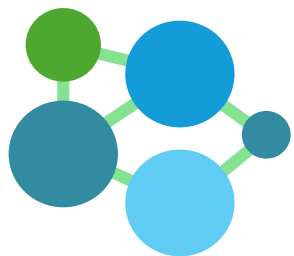
Strategy &
Governance



Siloed



Connected



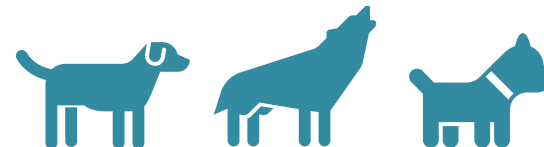
Scattered



Warehoused



Non-Standard

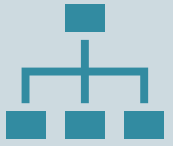


Standardized



We accomplish these improvements through Data Governance at Caltrans

ACCOMPLISHMENTS TO DATE



CDAO Role & Data and AI Office



AI Policies



AI Governance



FY 25-26 Funding



Pilot Projects
(Copilot, Traffic Mobility, and VRU Safety)



Strategic Data & AI Documents



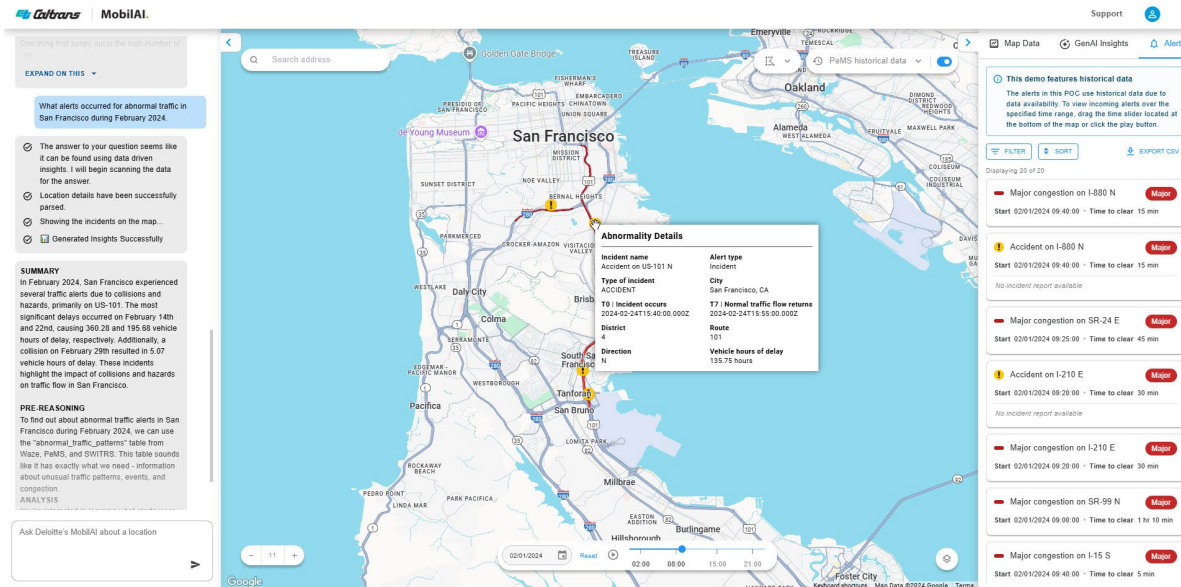
Workforce Training



**Communications & Change
Management**

GenAI Proof of Concept Project

Traffic Mobility Insights

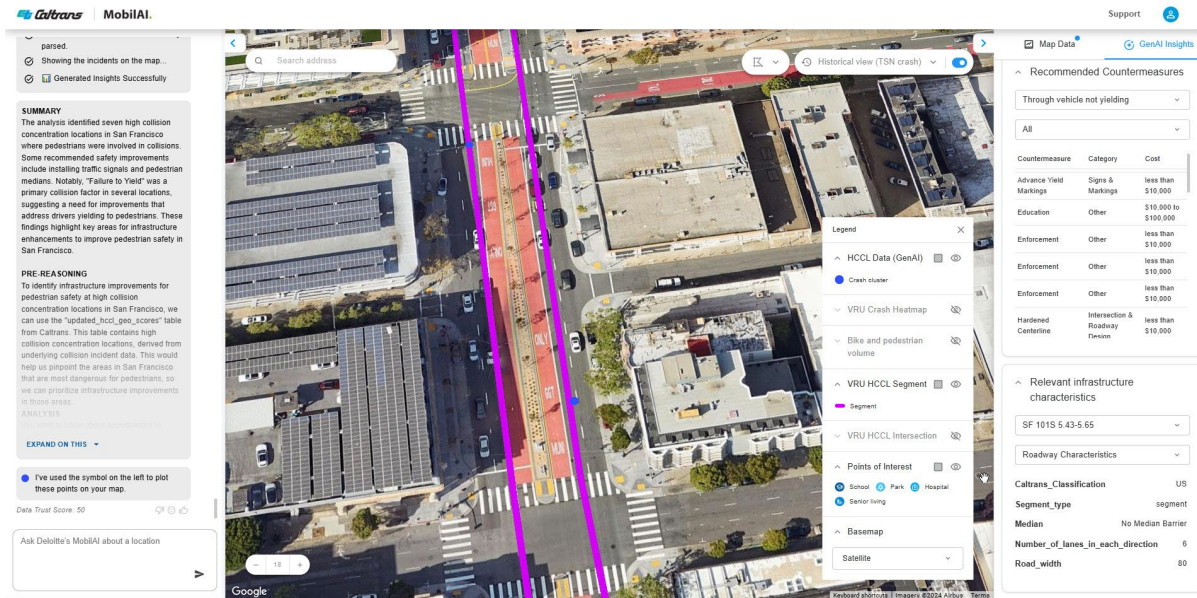


Key Benefits:

- Faster analysis of traffic patterns & impacts
- Enhance traffic, transit, and freight management
- Improve work zone safety
- Optimize infrastructure investments

GenAI Proof of Concept Project

Enhance Vulnerable Roadway User Safety



Key Benefits:

- Proactively identify locations needing safety improvements
- Speed up analysis, investigations, and reports
- Generate countermeasure solution & data-driven investment options

WHAT'S NEXT | PARTNERSHIPS



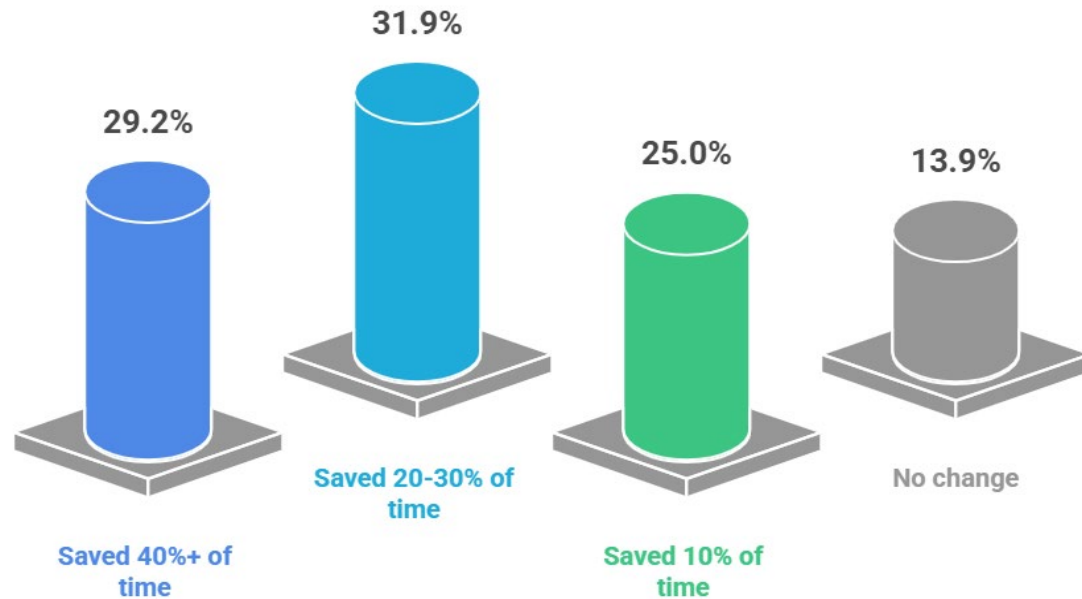
 **accenture**



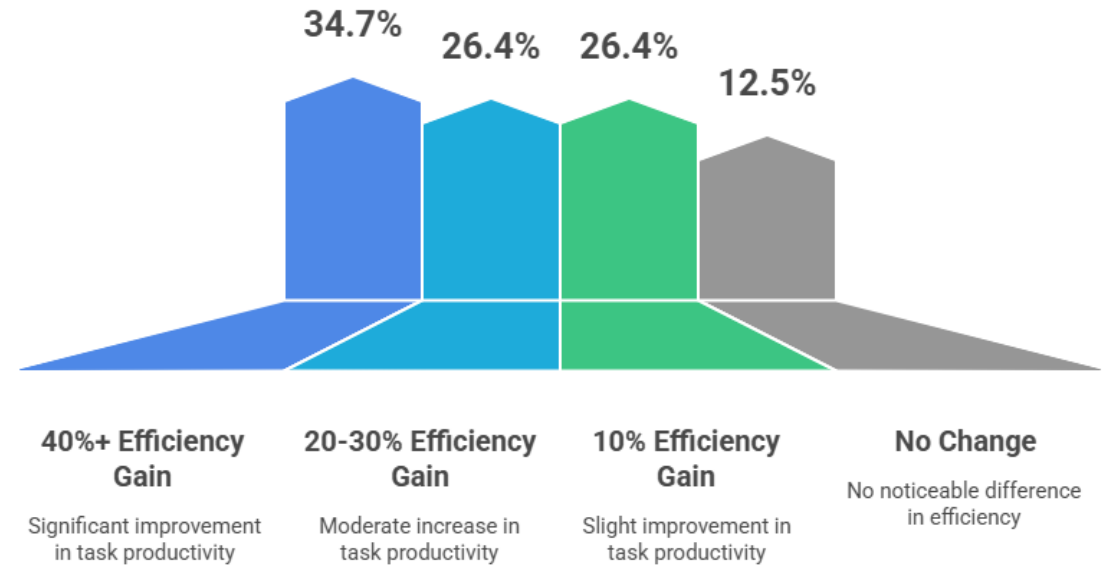
Deloitte.


Microsoft Copilot Proof of Concept

Time Saved on Written Communications
(Emails, Documents, etc.)



Efficiency Gains in Meeting Tasks



\$ Value:

Reported time savings generate a business value of **\$40,740***

*Based on an average time savings of 6 mins/interaction and a conservative \$30/hour wage

Data from Copilot Proof of Concept Project, reported by Caltrans staff testing Copilot

Workday Efficiencies with Copilot



Summarize long documents

Turn a 20-page, jargon filled document into 5 bullets or create a summary



Draft emails & social content

As your professional writer on call, draft, emails, captions, and more



Generate images

Custom-generate images and graphics for reports, emails, social, and more



Learn new skills

Ask questions tailored to your needs and interests to get consolidated key points



Get answers for specific & complex questions

Handle questions that require multiple data points and a degree of analysis

FUTURE USE CASES IN TRANSPORTATION

- Bid Prediction & Estimation
- Change Order Management
- Dynamic Signal Phasing for High-Volume Traffic
- Design Verification and Error Detection in PS&E
- Predictive Maintenance Planning
- Public Transit Demand Prediction





AI applications in transportation are expected to save the industry over **\$100 billion** annually.

AI in The Transportation Industry Statistics Report 2025, Gitnux



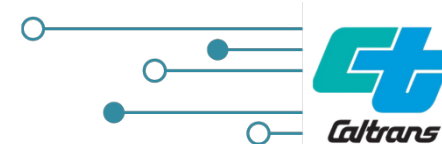
THANK YOU

Dara Wheeler

Acting Chief Data and AI Officer (CDAO)

Email: Dara.Wheeler@dot.ca.gov

Cell: (916) 296-1317



AI at Caltrans