Transportation Performance Management Webinar Series

Case Studies - Identifying Data Gaps and Developing New Data Collection Processes to Inform Decision-Making

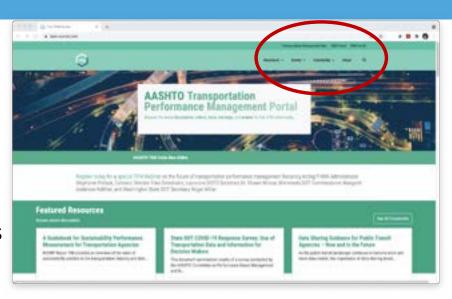
TPM Federal Highway

Sponsored by AASHTO and FHWA

Wednesday, March 19, 2025 TPM Webinar 25

Transportation Performance Management Webinar Series

- Our TPM webinar series is held every two months, on topics such as communications, system performance management, data sources, and many more to come!
- Today is the 25th webinar in our bi-monthly series
- We welcome ideas for future webinar topics and presentations
- Use the webinar chat panel during the webinar
 - Submit questions for today's presenters
 - Submit ideas for future webinar topics



Find us on the AASHTO TPM Portal https://www.tpm-portal.com

Webinar Agenda

- 2:00 Introduction, Agenda, & Other Updates
 - Christos Xenophontos, Rhode Island DOT, Chair, AASHTO CPBM.
- 2:05 AASHTO Perspective
 - Anna McLaughlin, AASHTO.
- 2:15 Planning for Destination Accessibility: Resources to Inform Decision-Making
 - Liz Williams, Massachusetts DOT.
- 2:35 Leveraging Centralized Citizen Issue Data to Help Drive Decision-Making
 - Stephen Kut, Rhode Island DOT.
- 2:55 Enhancing Data Management and Utilization for Decision-Making
 - John Hoang, Contra Costa Transportation Authority.

Webinar Agenda

3:15. Panel Q&A

- Christos Xenophontos, Rhode Island DOT, Chair, AASHTO CPBM.

3:30 Wrap-Up.

- Christos Xenophontos, Rhode Island DOT, Chair, AASHTO CPBM.

NCHRP Project 23-35 Survey

- NCHRP is partnering with Cambridge Systematics on NCHRP Project 23-35 "A
 Guide for Program Level Risk Management Performance Metrics."
- A questionnaire for DOTs will establish practices, gaps, and potential areas for improvement in the measurement and management of program risk.
- Please complete 15-minute survey (one per state DOT) by March 28, 2025:
 https://www.surveymonkey.com/r/programriskmetrics
- Any questions or issues with survey, please contact Joe Zissman at jzissman@camsys.com



AASHTO Perspective

Anna McLaughlin AASHTO



Upcoming Meetings

AASHTO Spring Meeting

May 12 – 15, 2025

Hartford, Connecticut

https://web.cvent.com/event/f7fb6a23-d66d-4e8c-819f-d38550e38bef/summary

15th National Conference on Transportation Asset Management

August 25 – 28. 2025

Chicago, Illinois

https://ctre.iastate.edu/events/tam-conference-15/

CPBM Annual Meeting and Peer Exchange

Save The Date: September 23-25, 2025

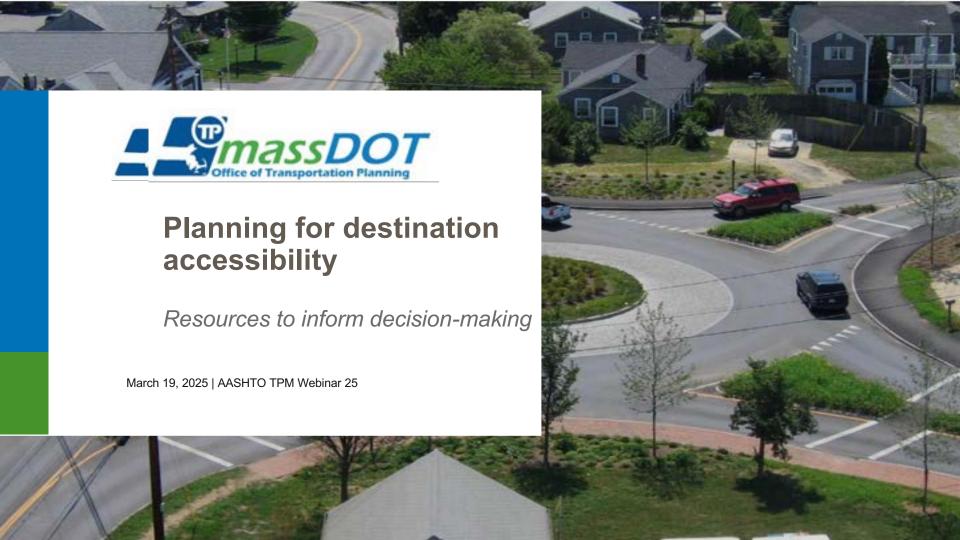
Baltimore, Maryland

Planning for Destination Accessibility

Liz Williams

Massachusetts DOT





Agenda

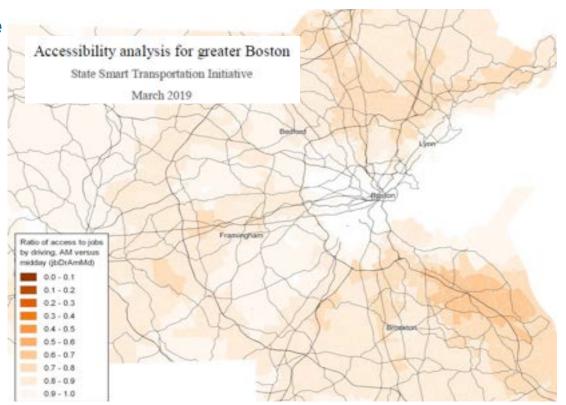
- MassDOT's experience
- Upgrading efforts
- Guidance documents
- Recent applications





MassDOT's Experience

- 2018: Began working with Sugar Access (later CUBE, now?)
 - Research projects with SSTI
- 2019: Began participating in FHWA National Accessibility Evaluation Pooled Fund Study
 - Provided with GIS files reflecting multimodal, temporally-specific job access
 - Created public-facing dashboard
- 2020: Procured Conveyal software





Upgrading efforts

- 2022: Began developing statewide long range transportation plan, Beyond Mobility
- Initial identification of six priority areas included destination connectivity







Upgrading efforts

- 2022: Began developing statewide long range transportation plan, Beyond Mobility
- Initial identification of six priority areas included destination connectivity
- (ongoing) MassDOT participation in several peer exchanges with other state DOTs and MPOs
- 2023: initiated development of Conveyal user guide for Office of Transportation Planning

Destination Connectivity



VISION

By 2050, due to targeted investments that have expanded access to everyday destinations for transit-critical and traditionally underserved communities statewide, there will be significantly more modal options, more equitable travel times, increased transportation choices, and far fewer first- and last-mile gaps for these communities.



VALUES

MassDOT believes that the primary purpose of the transportation system is to **connect people to the** places that they need and want to go.

MassDOT believes in the importance of measuring how **people**, **rather than just vehicles**, pass through the transportation system.

MassDOT is committed to the principle that a "regional rail" system with expanded service throughout the day is critical to building a stronger and more inclusive state economy.

MassDOT is committed to supporting **robust on-demand transit services** using dedicated drivers and vehicles across the Commonwealth, especially in communities served by Regional Transit Authorities (RTAs that may not have and/or lack the density to support fixed-route service.



Guidance **Documents**

- 2023: retained Nelson/Nygaard for an on-call study to help identify opportunities to use Conveyal in the traditional planning study process
- Deliverables included an introductory guide to Conveyal including when and how to use it, as well as an accompanying technical guide to help interpret analysis parameters and results



CONVEYAL IN MASSDOT OTP: TECHNICAL USER MANUAL

Overview: What Is This Document?

This discovery provides technical equipment on how to use Command to conduct accompletity analyses for Manadolf ATF planning projects. It will cover the following

- 1. Soying
- A. Harting & Project
- A. Setting up broadly along and Sometica
- 4 Conducting Anabous
- 5. Interpreting Experting and Houstoning Results

This public is intensited to supplement and contextualize Conveyel's existing discussionation, not replace it. The chie by wise publican for using Colveyal is unit-

documented in their official gas, Marcell and will be referred to throughout this document. The official Conseque than Manual provides retirem contentions and integer to easily follow I've may be may pultarion

If this is your first time using Consept, please make those three intputted monoral farfore going through this regreat?

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- Content Strongy This is part of Conveyed's efficial documentation and defines loss. servinatings used throughout the Consept platform. We sell reference these terms. throughout this elaboral, so it is important to become familiar with them.
- Command Design And retroductionly address for Conversal to appaint these

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- Sep Consept which being set to belief and building to the
- Tips will be indicated with a triue use: *
- Septions that supplement official Conveyal goldence have instructions believed at the beginning Name, and consideration will also be indicted froughted the document.



~ break for **Conveyal in OTP** slides

~



Technical Assistance Guide

Conveyel in MassDOT OTP: Tactorical User Manual MassDOT

CONVEYAL IN MASSDOT OTP: TECHNICAL USER MANUAL

Overview: What Is This Document?

This document provides technical guidance on how to use Conveyal to conduct accessibility analyses for MassDOT OTP planning projects. It will cover the following topics:

- 1. Scoping
- 2. Starting A Project
- 3. Setting up Modifications and Scenarios
- 4. Conducting Analyses
- 5. Interpreting Exporting, and Visualizing Results

This guide is intended to supplement and contextualize Conveyel's existing documentation, not replace it. The step by step guidance for using Conveyel is welldocumented in their official (Int. Natural and will be referred to throughout this document. The official Conveyel User Manual provides relevant screenshots and images to easily follow: the step-by step guidance.

If this is your first time using Conveyal, please review these three important resources before going through this manual.

- <u>Conveyal at ManDOT Uses Guide</u> This guide gives a non-technical overview of Conseyal, lockuding what it is and how it can be used in MassDOT projects. It is maintained internally by MassDOT.
- <u>Conveyor Glosser</u>. This is part of Conveyor's official documentation and defines key terminology used throughout the Conveyor platform. We will reference these terms throughout this manual, so it is important to become familiar with them.
- Conveyel Dense: An introductory video to Conveye's capabilities.

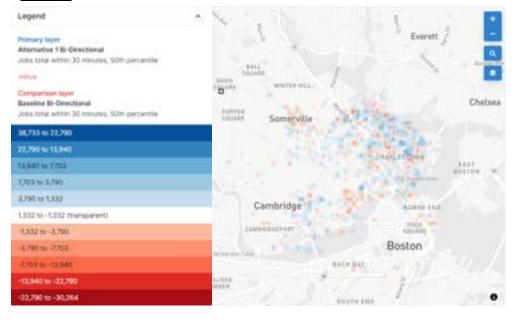
Key terms and tips will be indicated throughout this document as follows:

- Key Conveyal-related terms will be bolded and highlighted in blue
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- Gilmore Bridge transit planning study
 - considers the impact of different bus route types on job access, primarily in the areas of Cambridge, Somerville, and Charlestown
 - Alt. 1: dedicated lane
 - Alt 2: BRT
 - Bi-directional vs east/west-bound only

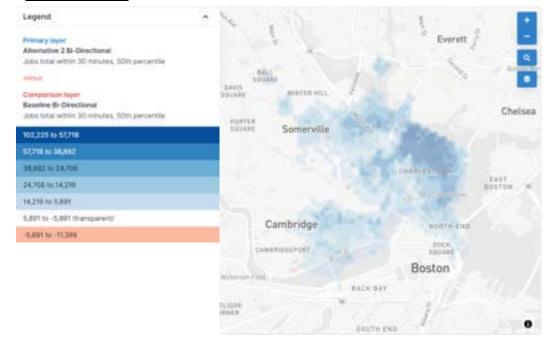
Map 1.1: REGIONAL ANALYSIS – Alternative 1 (Dedicated Gilmore Bus Lane) Bi-Directional vs Baseline Bi-Directional.





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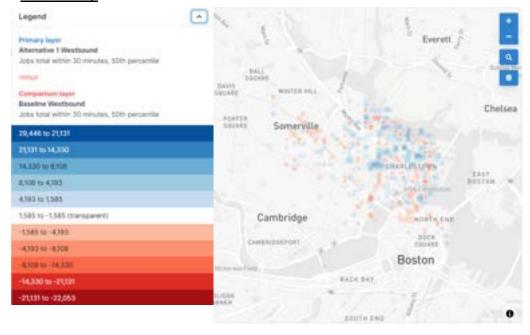
Map 1.2: REGIONAL ANALYSIS – Alternative 2 (Dedicated Bus Lane for Whole Route) Bi-Directional vs Baseline Bi-Directional.





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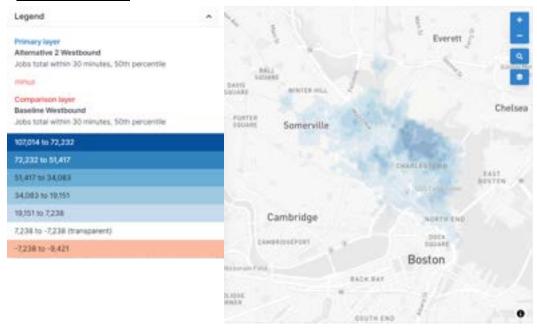
Map 2.1: REGIONAL ANALYSIS – Alternative 1 (Dedicated Gilmore Bus Lane) Westbound Only vs Baseline Westbound Only.





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Map 2.2: REGIONAL ANALYSIS – Alternative 2 (Dedicated Bus Lane for Whole Route) Westbound Only vs Baseline Westbound Only





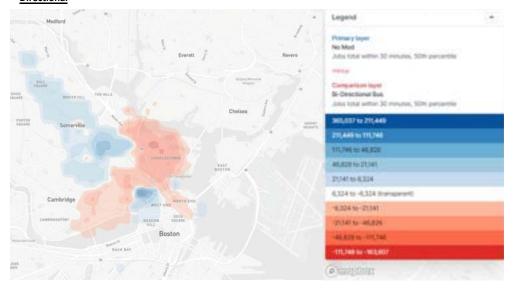
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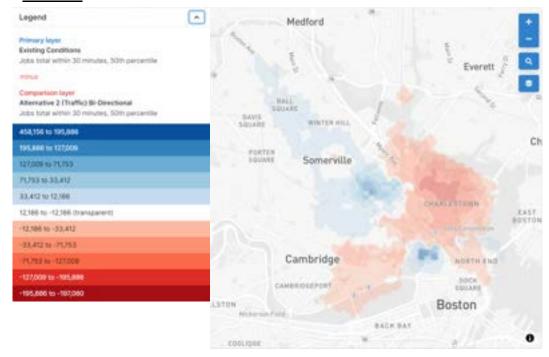
Map 3.2: REGIONAL ANALYSIS - Existing Conditions vs Alternative 1 (Dedicated Gilmore Bus Lane) Bi-Directional



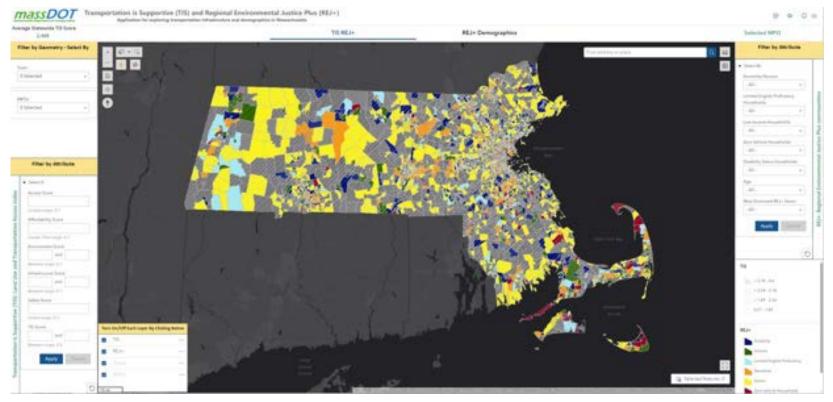


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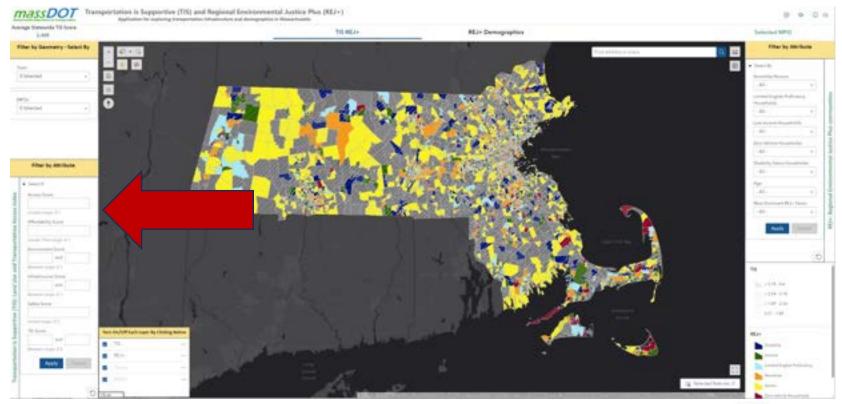
Map 3.3: REGIONAL ANALYSIS – Existing Conditions vs Alternative 2 (Dedicated Bus Lane for Whole Route)
Bi-Directional



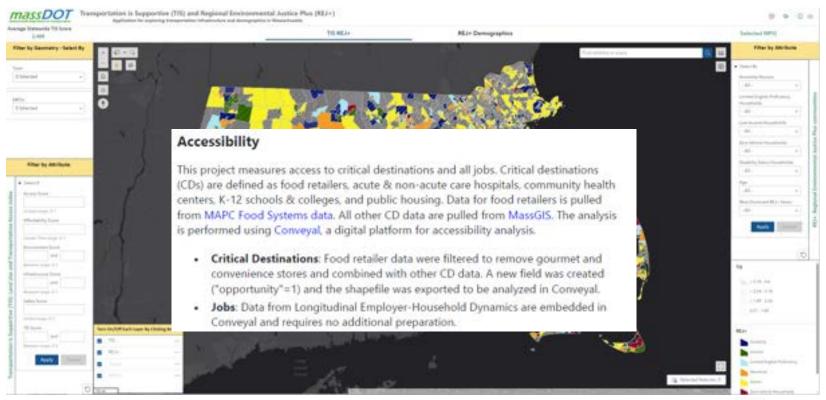
















Leveraging Centralized Citizen Data to Help Drive Decision-Making

Stephen Kut

Rhode Island DOT





Leveraging Centralized Citizen Issue Data to Help Drive Decision Making

3/19/25

Rhode Island DOT





Establish a Centralized System for Capture Issues and Complaints

- Replace the 6 or more systems for tracking issues.
 - Redundant
 - No way to report or analyze
 - Non spatial
- Immediately track responses to complaints logged by our Communications and Customer Service Unit Citizens
 - Governor's Office
 - Legislature
 - Cities/Towns
- Expanded to include
 - Traffic Management Center (TMC)
 - 24/7 Quick Response Calls (Dispatch)







Standardized Input

- Training on input of issues into proper category
- Accurate location key to analyzing the data
 - Link to asset data where possible Signs,
 Lighting, Guardrail, Striping, Walls, Catch Basins,
 Manholes, Signals, Bridges
 - Link to address or milepost if asset not identified
 - Location descripition derived from GIS asset link



Name Occurred	Catalise	2
13/11/2025 ER 32 AM	Intersection of TOMER MILL RD and COL. RODMAN MITY IN NORTH KING	S Carled into TMC
D/170005-08-25-AM	38 10 DEAN AVE, JOHNSTON	Drainage
DUTTORS EXCELLED	Intersection of TAUNTONIAVE and GOLDSWITH AVE in EAST PROVIDENCE VINA Zone town	
DATE BE SOUTH	Intersection of Rt. 1.A (NEWPORT AV) and VARTTER RD in Parabeted	Called Into TMC
DATED OF THE STATE OF	Intersection of RE 577 (BULLIANIMATER RD), and RESTFOR VALLEY AV in Thirthcoding	
MALES SERVICES	Interestion of RE 1.A (NEWPORT AV) and VARTTER RD in Foundated	Political
OFFICE RESEAR	HETS FLAT RIVER RD, COVENTRY	Proving
15/17/2025 FR 54 AM	265 North @ Route 114 North & South (Diamond Hill Road) - Cumberland ExtiPublise	
15/17/0905 NR S1 AM	Intersection of Rt 114 (DAMOND HILL AC) and HILLSEIC RD in Comberland Flooding	
0/17/2025 RE 45 AM	Intersection of ERIONICO HWY and GOUGLAS PINE in EURRICUVILLE. Sign: Traffic Signal On Flush	
DATESSES BE 41 AM	BIT HARREN AVE, EAST PROVIDENCE	Accident
WATE BE RESERVE	Interestion of INEST MAIN FID and HOME DEPOT is MEDILETONIN, Signar Traffic Signar On Florin	
DATED OF SERVICE	295 Torth @ 1 295 South to Route Greenote Are Johnston Exit Number 10	Signi Pole Dove
WATER STREET, NO.	206 E MAIN RO, PORTSMOUTH	Treffic Control
S1172025 NE 11 AM	Intersection of NEWFORT AVE and ARRESTICE BLVD in RWATUCKET . Sign Traffic Signal Do Flank	
5/17/0405 NO NO HA	206 E MAIN RO. PORTSMOUTH	Tone intime
DALCONS RESIDEN	TRI MENDON RD, CUMBERLAND	Flooding
WATER SOUTH	HIS PUTRIM PIKE, SMITHFIELD	Sign Dove
OVERDOS ET 40 AM	28 GRESWOLD AVE. BRISTOL	Tree lature
MARCH ROOMS	195-5-1-195 IV @ Wastington Bridge	Camera No Video/Poor Video
MA NETS 2000 FINE	Intersection of ROUTE 16 and PARK AVE in CRANSTON , Signal Ris. 267	Floring
SYTTO025 04 25 4M	Intersection of VIATERMAN AVE and JAMES ST in EAST PROVIDENCE. Sig Traffic Signal On Florin	
5/17/0905 94 19 AM	95_SER_S_CAM - Dome St	Camera No Video/Poer Vision
GHT DECS HE SZ AM	95 North @ Providence Place Mad Exit Humber 37D	Clebris
DATEDOS RE SEAM	Intersection of LCS & (NARTPORD PR) and Rs 118 (W SREEBVALLE RD) in	Is Time Issue
DATEDIOS DE 14 AM	Intersection of 203 DAMCRID HILL NO and NATE WHIPPLE RD in Cumberlar Tree Issue	
MA OF ER POSITIVE	95 South @ Allertin Avenue Evil Number 31A	Guardial Repor
CALLEGE BY 28 YEAR	15 South @ Rt 2 N & S (Quater Lane) - West Warrest Earl Deseroush Eat N Flooding	
DATES STREET	Intersection of GEORGE WASH: HIRTY and OLD RIVER RD to LINCOLN., Sign Traffic Signal Timing Issue	



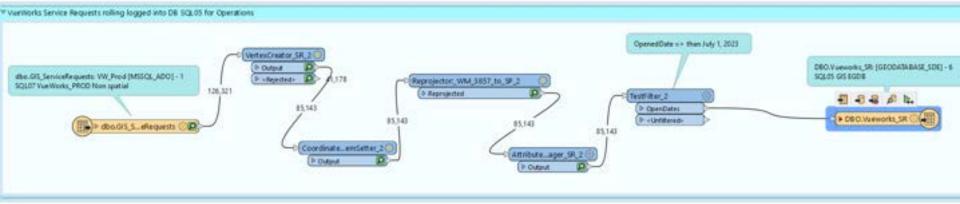
Operational Units responding to Issues

- Robust data set of over 120,000 Service Requests
 - Seven Maintenance Districts responding to service requests
 - Over 1000 issues logged from Customer Service Unit and TMC Monthly
 - Approximately 95% turns into work performed by Maintenance
 - Pavement, flooding, washouts, sweeping, debris, spills
 - Traffic Maintenance Unit
 - Highway lighting, traffic signals, & traffic signs
 - Bridge Maintenance Unit
 - Bridge joints, potholes on decks, railing issues, debris
 - Roadside
 - Trees, Mowing, Graffiti, Trash Issues
 - Safety Maintenance Contracts
 - Guardrail, Fence, Attenuators
 - Project Management
 - Project Issues
 - Drainage Maintenance
 - Flooding Issues



Prepare Data for Analysis

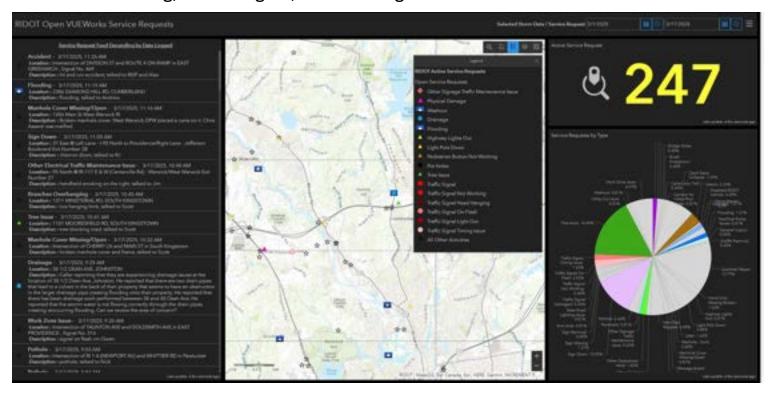
- ETL data from SR System to Enterprise GIS for sharing and analysis
 - Data uses for operational dashboards and for project development





Maintenance Operations

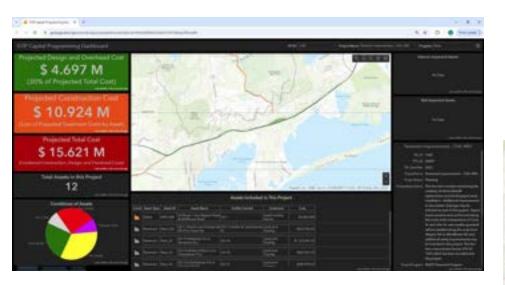
- Operations Dashboards During Major Events
 - Prioritize Resources
 - Flooding, Traffic Signal, Tree Damage

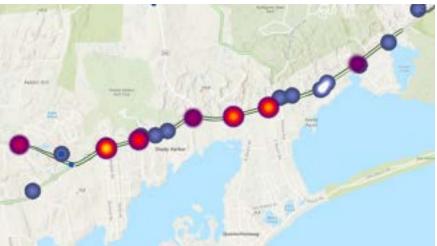




Project Development

- Summary of issues within and near Project ZOD
 - Helps to validate asset condition data
 - Used to identify additional scoping items to projects

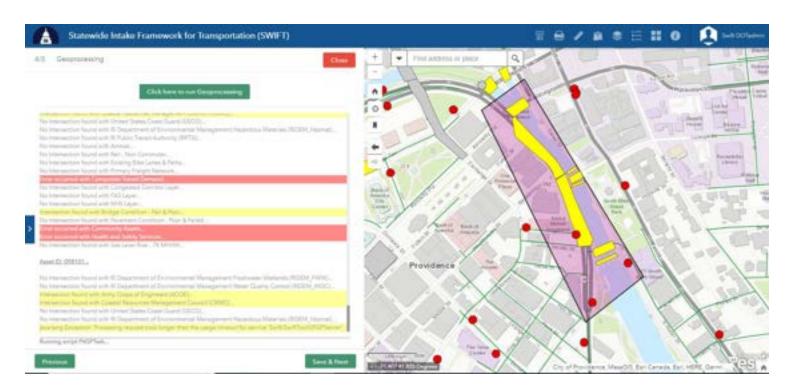






Next Steps – Include Issue Data in Project Geoprocessing Engine

- Automate the summarization of data by project
 - Statistics of issue type by project area
 - Flexibility to rerun as projects limits change





Next Steps - Post Project Analysis

- Did we meet our goals of the project?
 - Reduce the number complaints within the area identified
 - Flooding
 - Pavement
 - Traffic Signals
 - Reduced impacts during major weather events



Enhancing Data Management and Utilization for Decision-Making

John Hoang

Contra Costa Transportation Authority





Enhancing Data Management and Utilization for Decision-Making

AASHTO/FHWA TMP WEBINAR 25 March 19, 2025

John Hoang
Director, Planning

Contra Costa Transportation Authority



Who We Are

 CCTA is a public agency formed by voters in 1988 to manage the county's transportation sales tax program and to lead transportation planning efforts.

 CCTA is responsible for maintaining and improving the county's transportation system by delivering critical transportation infrastructure projects to safely and efficiently, get people where they need to go.

What We Do



PEDESTRIAN

Improvements to sidewalks, crosswalks, trails, and paths



LOCAL STREETS

Smooth traffic flow on major roads and make surface improvements such as pothole repairs



BUSES

Invest in a reliable, comfortable and convenient bus network



SAFE ROUTES TO SCHOOLS

Focus on programs and projects aimed at bicycle and pedestrian safety for K-12 students



FERRIES

Expand ferry system by looking to ferries as an alternate commute method between West County and San Francisco



BICYCLE

Invest in safe routes and infrastructure improvements for bicyclists



BART

Improve BART service and stations, extend routes and increase parking



HIGHWAYS

Complete Contra Costa's highway system, and improve air quality and noise protection along corridors



INNOVATIVE SOLUTIONS

Implement smart transportation infrastructure to reduce congestion and encourage greener travel



PROGRAMS FOR SENIORS AND DISABLED

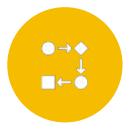
Enhance transit options to improve mobility for seniors and people with disabilities

Contra Costa County SOLANO COUNTY Martinez Antioch San Pable Concord Pleashot Hill III Cerrito Walnut Creek CONTRA COSTA Lafayette COUNTY Darville San Ramon ALAMEDA Contra Costa County COUNTY Regional Transportation Planning Committees (RTPCs) TRANSPAC (Central) TRANSPLAN (East) WCCTAC (West) SWAT (Lamorinda) SWAT (Tri-Valley)



- 1.155 million residents (2023)
- 19 incorporated Cities/Towns
- 3,200 miles of roadway
- 5 transit providers + Amtrak

CCTA Data Initiative



VISUALIZE DATA



PROVIDE INSIGHTS



TELL A STORY



TARGETED AUDIENCE Disconnected Data, Disconnected Decisions:

Overcoming the Silo Effect

Data is just data—until you connect, analyze, and act on it. Only then does it become actionable information.

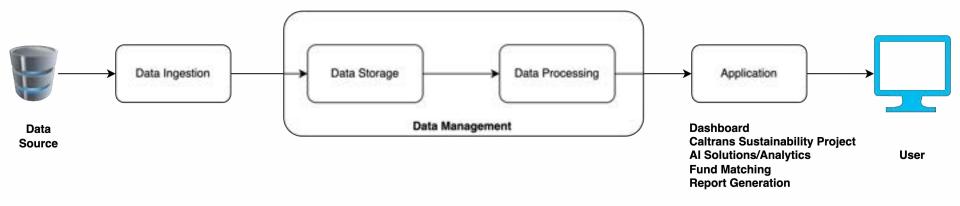


Data Fabric: The Foundation for Data-Driven Solutions

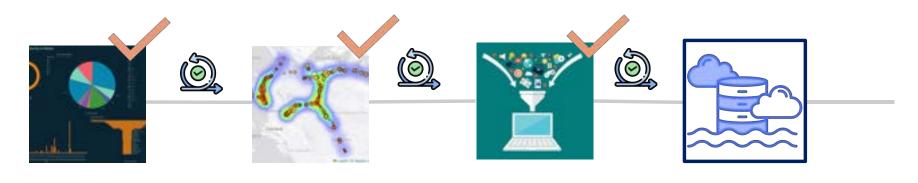


Data Fabric is an architectural approach that connects and integrates all data sources, empowering organizations to efficiently utilize their data across various environments.

Data to Action



CCTA Multi-Year Data Plan



2022- Phase I

Demonstrated cloud capabilities as a Proof Of Concept.

2023 - Phase II

Analytics dashboard utilizing data available: Inrix planning speed and incident data, PeMS, and Streetlight.

2024 -Phase III

- CCTA Data Repository
- Gen-Al
- Predictive analytics
 Project Central Platform

2025 & after – Phase IV

- Large-scale knowledgebase
- Enhanced Al Features
- Scaled real-time data ingestion and export

CCTA Data Portal: Transportation Insight Reimagined



data.ccta.net





Data and Maps: Traffic Safety and Congestion Management Countywide

CCTA and its regional partner agencies are using real-time traffic data to help manage congestion on county roadways. This website shares some of the key data that informs CCTA's decision-making around transportation challenges. It also provides tools for you to make informed decisions about how and when you travel.

Traffic Safety at CCTA: Countywide Vision Zero

Safe travel for all is the top priority at CCTA. Alongside our boat partners, we have developed the framework for <u>Vapor Zerg</u>, which views transportation related fetalities, as preventable, not inevitable. The state shown here is the basis for our work to ensure the well-being of travelers of all ages and utilities, including people watering and bicycling.

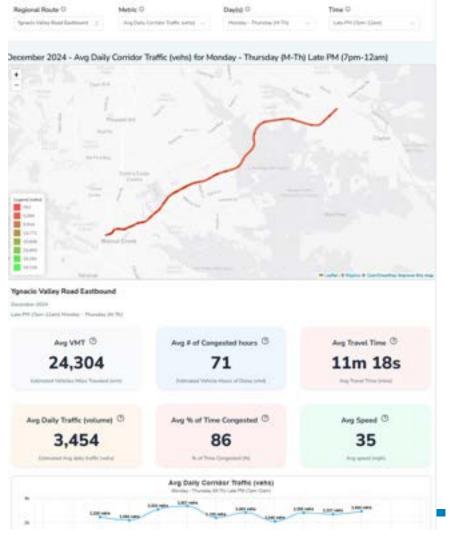
February 2025's incidents vs last quarter's incidents



Move to read this chart

Delive into the resists of traffic analysis by comparing the incident data hain the content with the previous spaces. The testinas background represents the previous spacetry, incidents. The testina represent last mentity's incidents with the total being the incident seventy and tate representing incident abulation. Cook or any incident standards.

This comparative explointion allows us to discern patterns, trends, and richiworthly shifts in traffic conditions. This proudtive approach ensures that our conjection management shaftiges evolve and adapt to the dynamic nature of transportation, ultimately resulting in enhanced commuting disponences for all.



Data Collection

- Speed
- Volume
- Traffic Congestion
- Road Safety/Collision
- Pedestrian and Bicycle Crash
- Realtime & Historical Data
- Transit

Data Sources

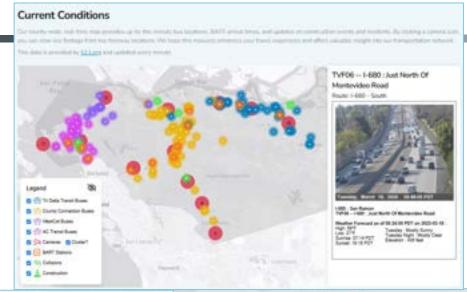
- Inrix: Highway congestion and incidents
- Performance Measurement System (PeMS): highway VMT
- StreetLight: Routes of Regional Significance VMT, speed, delay
- BART: BART ridership
- Caltrans: CCTV
- CCTA Internal Data: Projects, documents, and reports

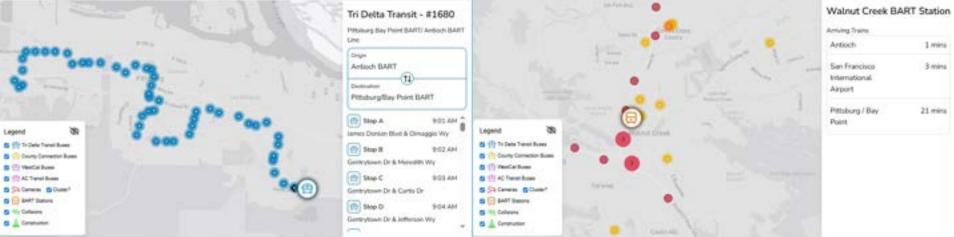
February 2025 Speed AM Time Period EAM - SAM & 1-580 W Légené 436 Skywnst AW Day of Wisels 440 Tuesday (14.7 mins) 145 in February 2025 -40 +55 - SA E 40x 7 AM (15.73 mins) W.February 2025 Speed Josephi. How to mad this man AM Peak VMT A yearly look at Speed 1.027.900 | -9% subrepared to January 252% 靈 Miw 2024 May 2024 Singl-2024 New 2004 Jan 2025

Quick Insight Into February 2025

Realtime Data

- 511.org: Real-time bus,
 BART, highway accidents and construction
- Caltrans





Ai

- Database
- Knowledge Based





Ai Assistants

All assistants are limited to CCTA employees only

We are exitted to offer beta previews of our AI assistants. Dur AI assistants will only look through selected CCTA's database tables and selected documents for relevant information to answer your question.

The system may occasionally encounter errors or reconsistencies as we continue to refine its capabilities. Users should verify critical information and report any issues to himp improve accuracy.

Ask knowledge base questions

Ask questions in a chat-like manner against a knowledge base of general decuments like:

- . "How is CCTA addressing safety across the county?"
- "What benefits would Contra Conta residents expect given our proposed mass transportation improvements?"

Try our branefaction bean assistant



Ask questions over our database and knowledge base together

Ask questions related to projects & incidents as well as the CCTA's knowledge base, like:

- · "Which projects" address safety?"
- "Which Freeway conidor had the most severe incidents last month? What was the average duration of those incidents?"
- "List all the incidents (with a date and description) that required a SigAlert in 2024"
- . "How is CCTA addressing safety across the county?"
- "What benefits would Centra Costa residents expect given our proposed mass transpertation improvements?"

Try our database & knowledge base issuatant

We are in the process of adding more data sets. Routes of Regional Significance (RRS) metrics is next.

Features of CCTA Data Portal

- Centralized CCTA Knowledge Base
- Custom Dashboards & Reports
- Al-Driven Insights
- Real-Time Traffic Monitoring
- Project Impact Analysis
- Grant & Policy Support



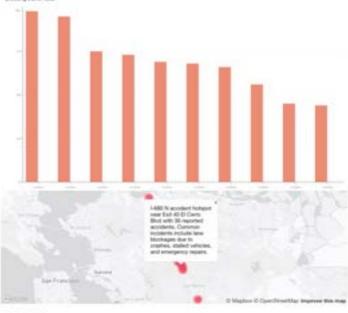
1-690 N Accident Hotspots

Based on the data analysis, the major accident hatopolis on 1-860 Northbound in Contra Coulo County and

- Near Exit 46 That Blvd (96 accidents) This area has the highest soccentration of accidents, with frequent time biochages. Manuscolers, involve multiple tames being blocked, particularly larger F1 and F2.
- Near Earlt SE Waterfront RejMarina Viota Are dRS accidental The record most dangerous area, with numerous accidents affecting multiple lates and frequent shalled withins.
- Around CA-142 interchange (P5 accidents) This area before Exh SUCA-142 experiences many multi-vehicle country and lareal literature.
- Rear CA-34Ygnacia Vallay Rd Interchange (73 accidents) The president of 400 experiences begand accidents affecting resultiple large.
- Near Eath 38 Systemore Valley Not 369 accidents) This surprised has numerous accidents with multiple large blockages and shallow vettices.
- Around Exit 458 CA-24 (68 accidents): Another problematic one near the CA-24 intenhange with frequent mathes.
- Rear Stone Valley Rd (SR accidents): The area around Early 42.4/428 experiences many accidents effecting multiple lanes.

Other notable hat gots include the area more East SSCA-4256 accelerate, East 3th Deable Rel (45 accelerate), and the Bernica-Hartimas Bridge area.

The most common issues at three hotigotic include multi-vehicle creates, stated selector, defen, on the read, and tare blockages affecting scales have.



Raw SQL Date

Utilization?

- Network Monitoring
- Performance Measures
- Vision Zero
- Public awareness
- Analytics and decision making
- Board of directors
- Fund allocation and grant applications
- Project prioritization
- Monthly and quarterly performance reports
- Top management quick access to performance metrics

Benefits



Faster, Data-Driven Decision Making



Comprehensive & Centralized Insights



Enhanced Efficiency & Accuracy



Improved Traffic & Safety Planning

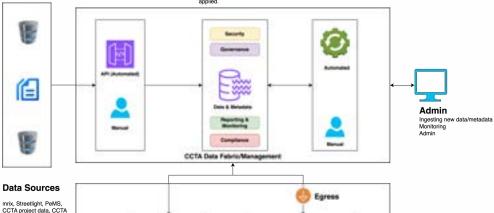


Greater Public Transparency & Engagement



Data Ingestion

- Data uploaded along with metadata manually by a user/admin or collected automatically via API.
- Raw data stored securely and logged. Compliance is applied.
- Processed data stored in to various forms and tables (Databases). Compliance is
- **Data Preparation**
- Raw data cleaned, processed (transformed) and quality checked.



Inrix, Streetlight, PeMS, CCTA project data, CCTA documents.

Al/Machine **Learning Models**

CCTA

Applications

Models that are trained and used for Al/ML-driven solutions. They use data stored int he data lake.

Data & Al Driven **Applications**

At heights/handed Production Automation

Simulation:

Marriery & Detection

User

User makes a request via desktop, iPad, or cell

phone from an App

- Dashboards and apps are updated.
- Application request data.
- Application uses AI model.

How are we doing it?

Continuous Delivery



Iterative and Gradual Development

Low Risk



Flexible



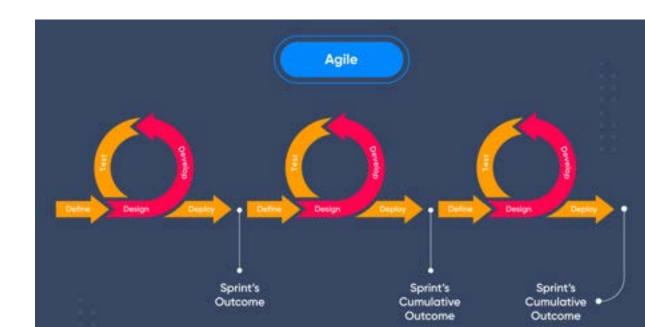
Adaptability to Uncertainty



Fail Fast, Correct Fast

Faster Time-to-Market









Panel Q&A

Christos Xenophontos

Rhode Island DOT



All TPM Webinars: https://www.tpm-portal.com/event-directory/tpm-webinars/

Save the Dates!



May 21, 2025 – TPM Webinar #26: Case Studies in Telling a Story – How to Leverage Collaboration and Communication in Performance Management

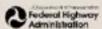
July 16, 2025 – TPM Webinar #27: Evaluating Post-Project Outcomes

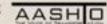
October – Date TBD – TPM Webinar #28: Proceedings from the CPBM Annual Meeting and Peer Exchange

November 19, 2025 – TPM Webinar #29: Implication of AV and Shared Mobility to Transportation Performance Management

Webinars Typically Begin at 2:00 PM Eastern Time







For more information or to register: TPM-Portal.com