TRB Webinar: Developing Statewide Comprehensive Transit Information Systems

May 15, 2025

3:00 – 4:30 PM

PDH Certification Information

1.5 Professional Development Hours (PDH) – see follow-up email

You must attend the entire webinar.

Questions? Contact Andie Pitchford at TRBwebinar@nas.edu

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1.5 American Institute of Certified Planners Certification Maintenance Credits

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Purpose Statement

This webinar will discuss strategies for integrating diverse transit data into a single platform or centralized source. Different state DOTs and MPOs have different goals for this integration—ranging from data collection and analysis to enhancing traveler information—which result in varied approaches. Presenters will share examples of these approaches, highlight common challenges and solutions, and explore ongoing questions about implementing integrated transit data systems at the statewide or regional level.

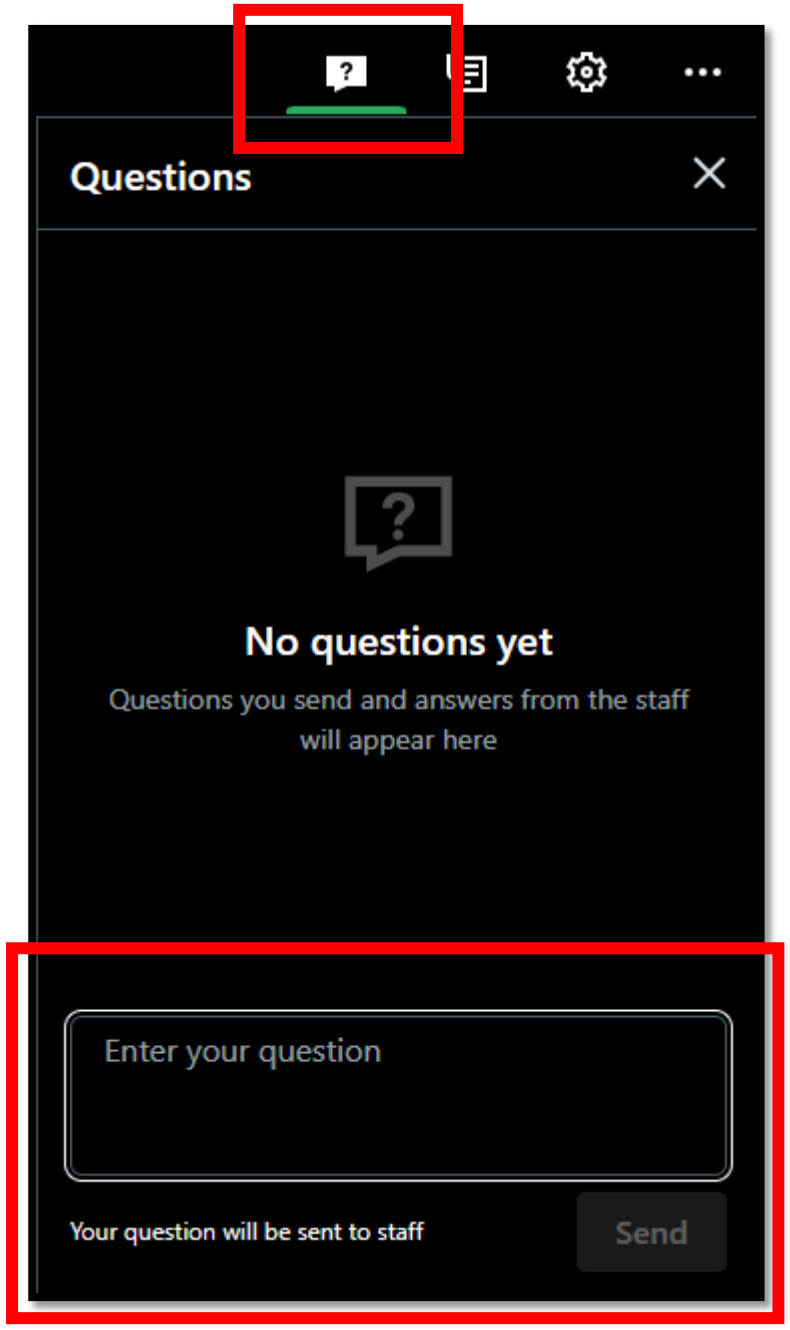
Learning Objectives

At the end of this webinar, participants will be able to:

- Identify key motivations for state DOTs and MPOs to integrate transit data across multiple agencies
- Describe common strategies and approaches used to create comprehensive transit data systems
- Recognize challenges and best practices when implementing integrated transit data solutions at a regional or statewide level

Questions and Answers

- Please type your questions into your webinar control panel
- We will read your questions out loud, and answer as many as time allows



Today's presenters

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Developing Statewide Comprehensive Transit Information Systems

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Introduction

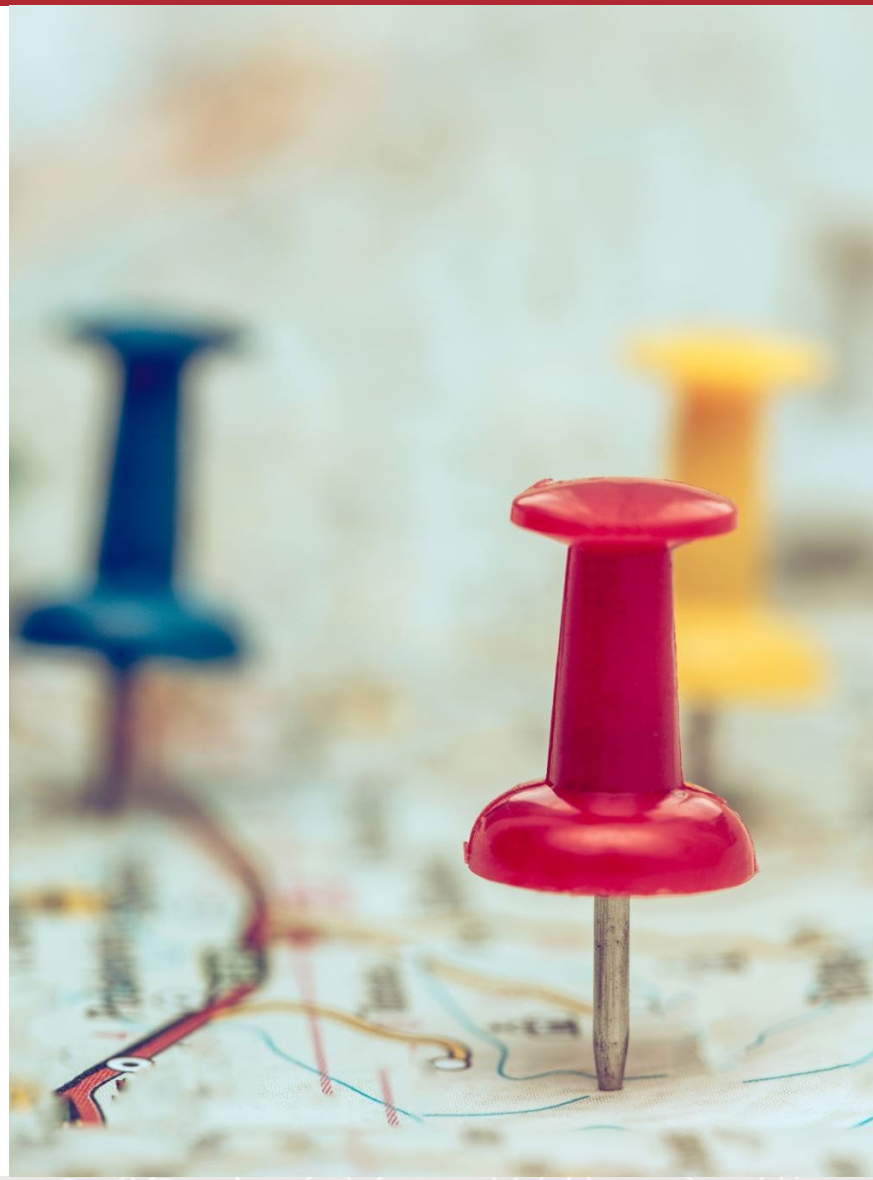
Purpose of the Study

- Why and how do state departments of transportation (DOTs) and a few metropolitan planning organizations (MPOs) develop statewide/regionwide transit information systems?

- Research conducted for TCRP Synthesis 172: *Statewide Approaches to the Development of Comprehensive Transit Information Systems*

Overview

- State DOTs and MPOs are natural hubs for transit data
- Integration supports planning, innovation, and user access
- …but goals and tools vary!



What is the General Transit Feed Specification?

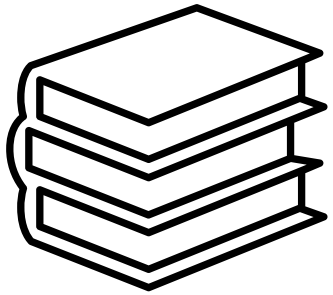
- GTFS = standardized format for fixed-route transit data
- Agencies can publish GTFS
- Trip planners (e.g., Google Maps) use the data
- Extensions: GTFS-Flex (demand-response), GTFS-Realtime

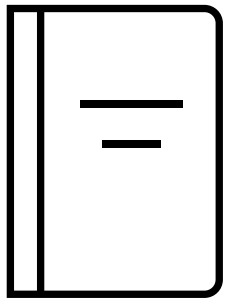
Motivations for Integrating Transit Information

- For users…
  - find services
  - plan trips and make connections between services
- For researchers…
  - collect transit data in a standardized format
- For agencies…
  - encourage standardized reporting
  - enable regional connections and otherwise support riders
  - identify gaps in regional connections

The Current Study

- Document current DOT practices for transit data integration
- Methods: literature review, survey, case studies
- Focus on tools, strategies, and stakeholder goals





Background and Literature Review

The Need for Consolidated Information

Multiple providers create difficulties for users to find relevant transit data

Disjointed systems hinder accessibility and coordination

Consolidation aids both riders and planners

Strategies for Data Consolidation

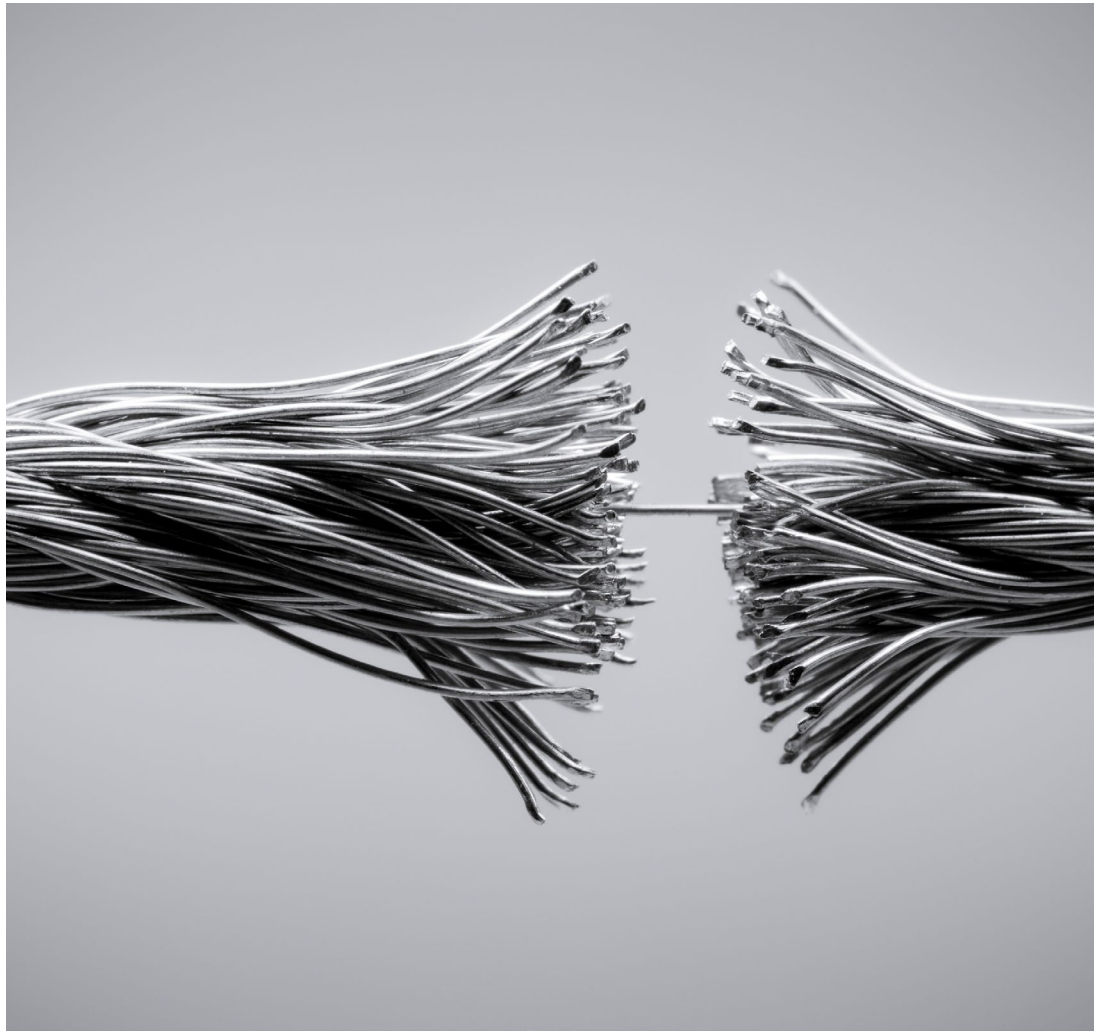
State-level support for GTFS development (e.g., CA, OR)

Use of tools like GTFS Builder, validators

Encouragement through funding and technical aid

Data Issues in Producing Regional GTFS Feeds

- Technical skill and staffing shortages
- Difficulty integrating flexible services (e.g., demand-response)
- Feed inconsistencies and outdated information



Funding Sources

FTA GRANTS: ICAM, AIM, SMART, CARES

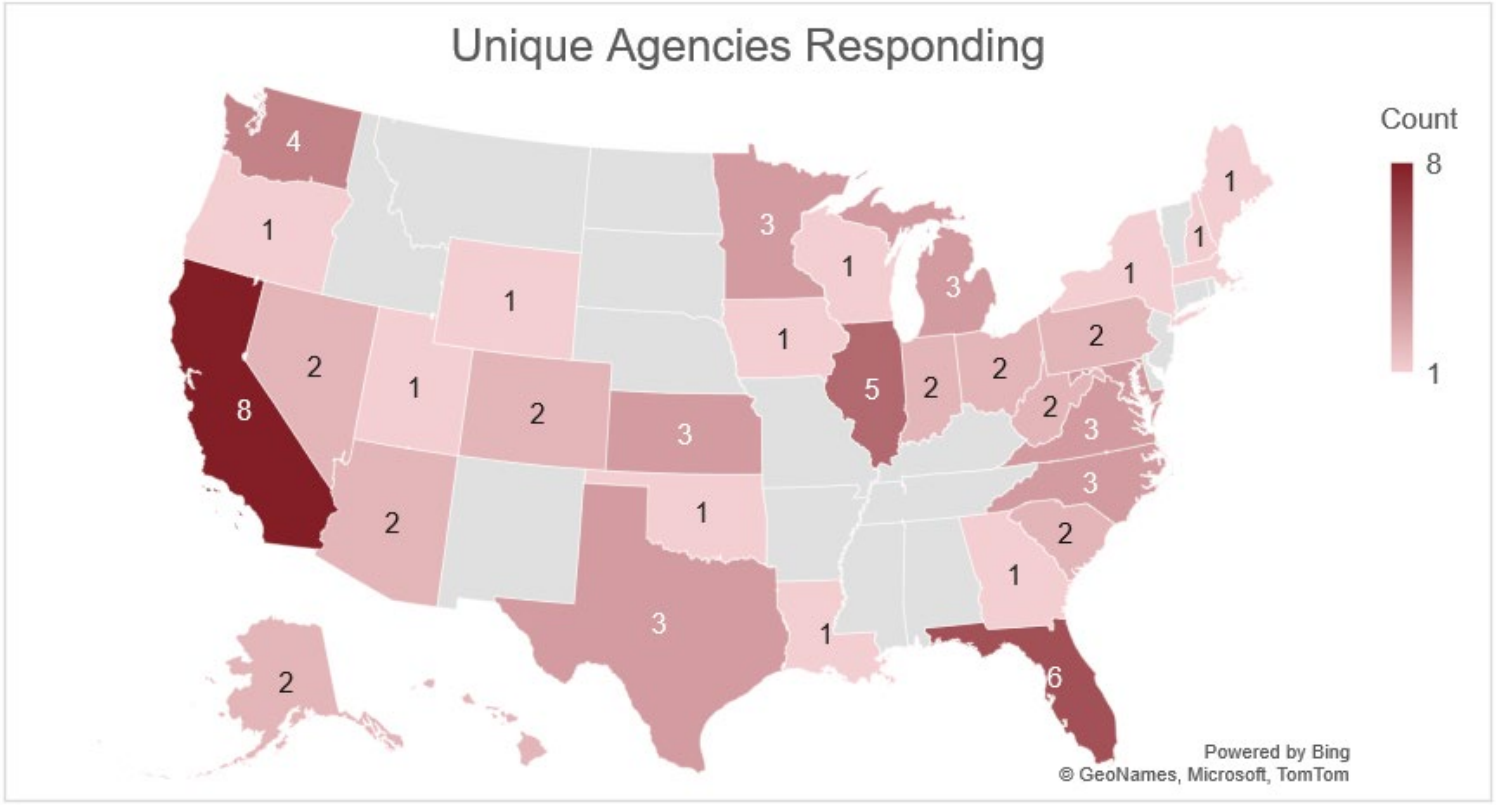
FEDERAL/STATE BLEND OFTEN FUNDS DATA TOOLS

MAINTENANCE COSTS REMAIN A LONG-TERM CONCERN

Survey of Practice

Discussion of Survey Respondents

- 92 responses
- 83 unique US-based firms or agencies
- 59 transit providers
- 20 “data collectors”
- Broad geographic range



Data Collectors' Goals

Agency Name	State	GTFS List	Service Search Tool	Trip Planning Tool	Other
Caltrans	CA	X			
MTC	CA	X	X		
ATL	GA				X
Flint Hills MPO	KA			X	
MD Transit Admin (Office of Local Transit Support)	MD	X			
MDOT	MI				X
MnDOT	MN	X	X	X	X
Charlotte Regional TPO	NC			X	
ODOT	OH	X	X	X	
PennDOT	PA	X	X	X	
North Central Texas COG	TX	X			X
VA DRPT	VA	X	X	X	
Northern VA Trans Commission	VA				X
WSDOT	WA	X	X		X

Case Examples

Vermont Agency of Transportation and Go! Vermont

- Go! Vermont includes trip planner that uses GTFS & GTFS-Flex
- Focus on user-friendly interface and marketing

Key Facts

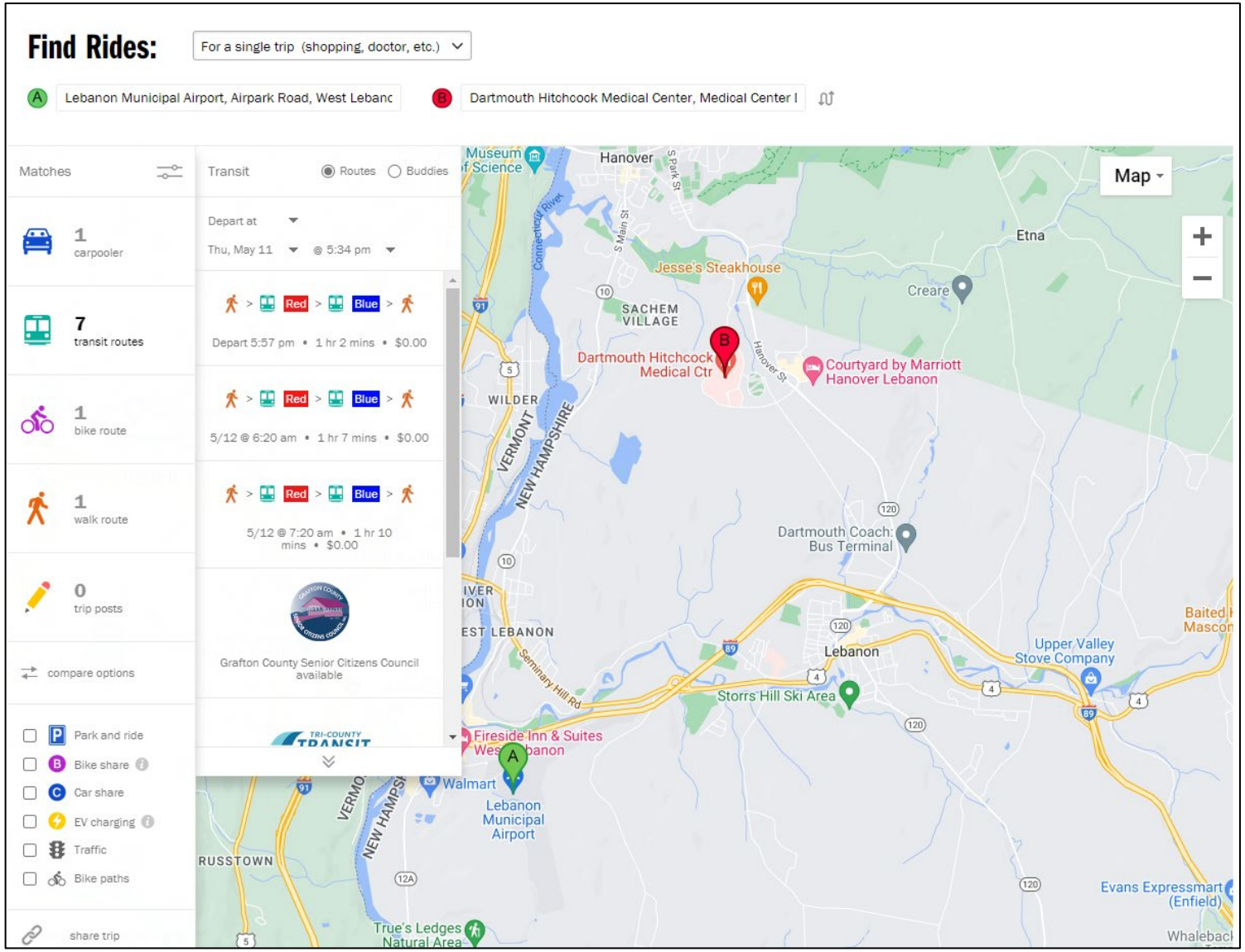
Agency: *Vermont Agency of Transportation (VTrans)*

Project: *Trip-Planning Website*

Coverage:

7 public transit agencies w/bus and demand-response services
Amtrak
private intercity bus

Go! Vermont Trip Planner



Michigan DOT

Key Facts

Agency: *Michigan DOT*

Project: *MaaS Platform* (in Progress)

Coverage: *76 public transit agencies, primarily fixed route services*

- MDOT planning MaaS platform
- Would integrate rural and urban transit data
- GTFS-Flex pilot with 4 rural agencies
- One function would be Service Finding, even when there are no GTFS data

Virginia DRPT

- DRPT built public service directory + GTFS clearinghouse
- Developing trip planner using GTFS-Flex
- Tools support planning and transit equity studies

Key Facts

Agency: *Virginia Department of Rail and Public Transportation (DRPT)*

Projects:
- *Directory of Services* (Available to Public)
- *GTFS List for All Agencies* (Available to Public)
- *Trip-Planning Tool* (in Progress)

Coverage:
- Directory:
  - *Transit, intercity bus, and paratransit*
- GTFS List:
  - *GTFS static for 39 transit agencies and 1 intercity bus service*
  - *GTFS-Flex for 10 services*

Minnesota DOT

Key Facts

Agency: *Minnesota DOT (MnDOT)*

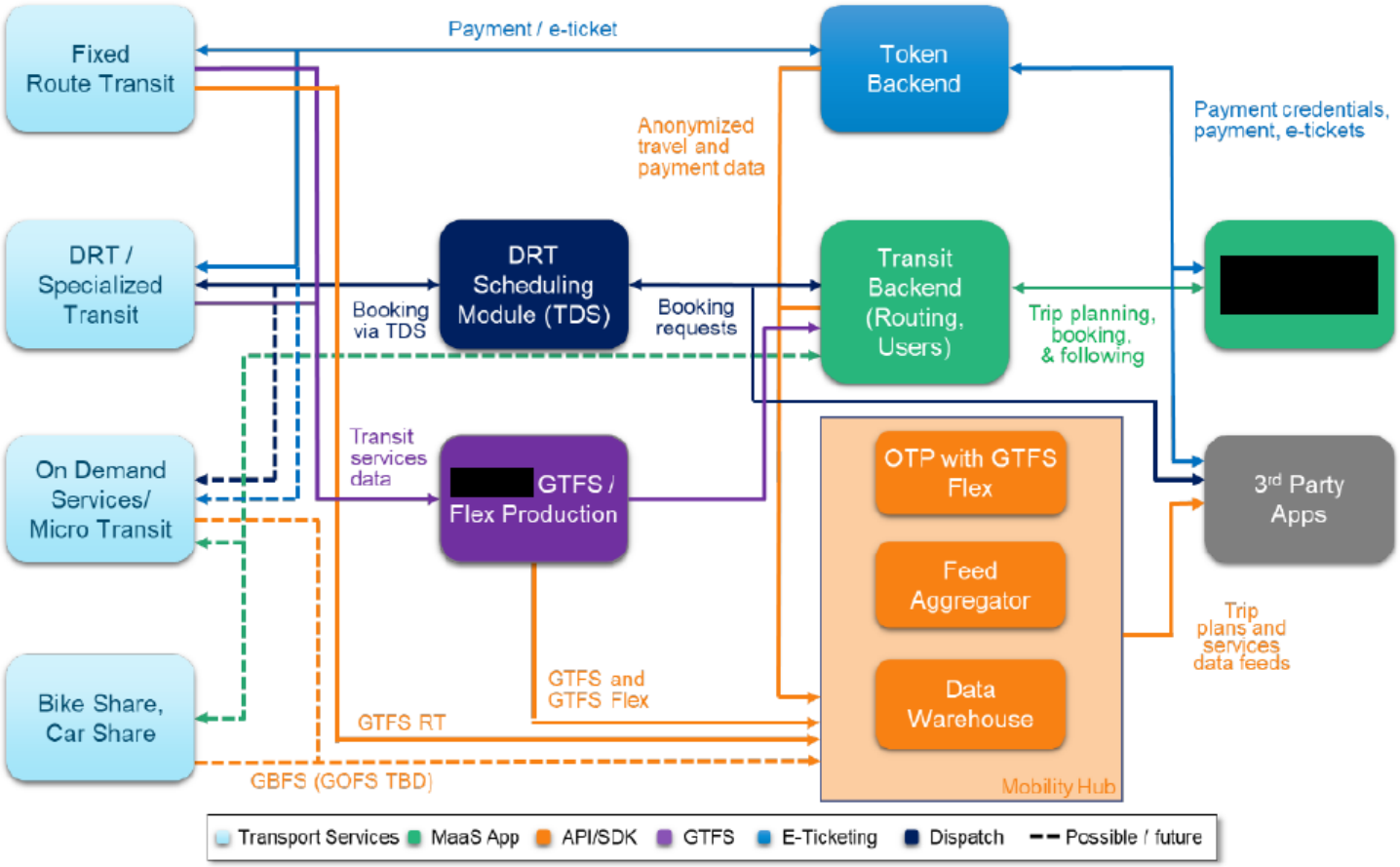
Project: *MaaS Platform with API* (in Closed Testing)

Coverage:

GTFS for 35 transit agencies
GTFS-Flex for 2 agencies
GTFS for private intercity bus

- Comprehensive plan for data for providing an API
- Endpoint of API allows apps to take advantage of the data

MnDOT Schematic



Cal-ITP

- Includes data pipeline, GTFS ingest site, Mobility Marketplace
- Emphasis on infrastructure over public tools
- Explicitly not about creating a public-facing trip planner, but a data hub

Key Facts

Agency: *Caltrans' California Integrated Transit Project (Cal-ITP)*

Projects:

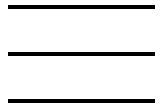
MaaS Data Pipeline (Continuous Dev)
Mobility Marketplace (Available to Agencies)

Coverage: *GTFS for 300+ transit agencies*

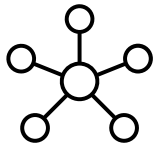
Summary

Diverse Platforms Server Diverse Goals

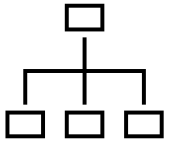
- Clearinghouse approach



- Trip planning applications



- Data infrastructure

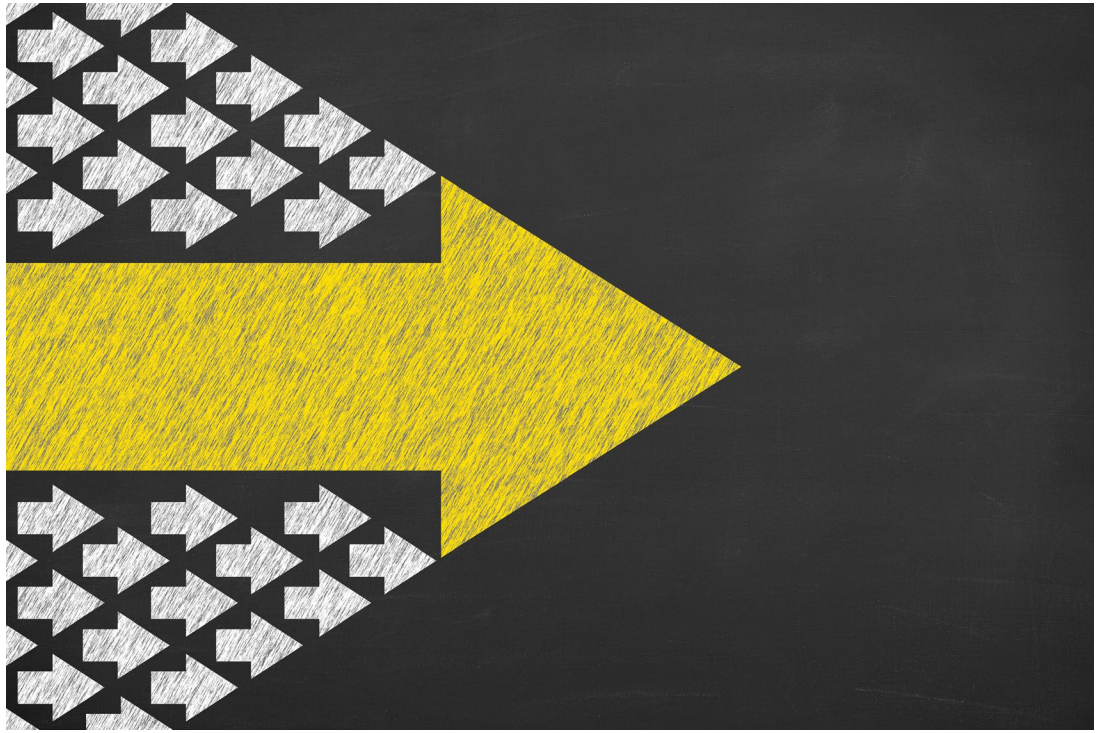


Role of GTFS

- GTFS is usually how the data is represented
- But agencies can have difficulty implementing it
- Agencies only supporting demand-response may have a harder time implementing GTFS-Flex

Areas for Further Study

- Practices for payment integration
- GTFS-Flex adoption – best practices
- Managing data from multiple agencies
- Further research uses of the data once collected



Thank you!

EBP

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Upcoming events for you

TRB National Summit on the Future of the Transportation Workforce

June 2-4, 2025

Westminster, CO

https://trb.secure-platform.com/a/page/transportation_workforce

TRB National Conference on Tools of the Trade

June 23 - 25, 2025

Alburquerque, NM

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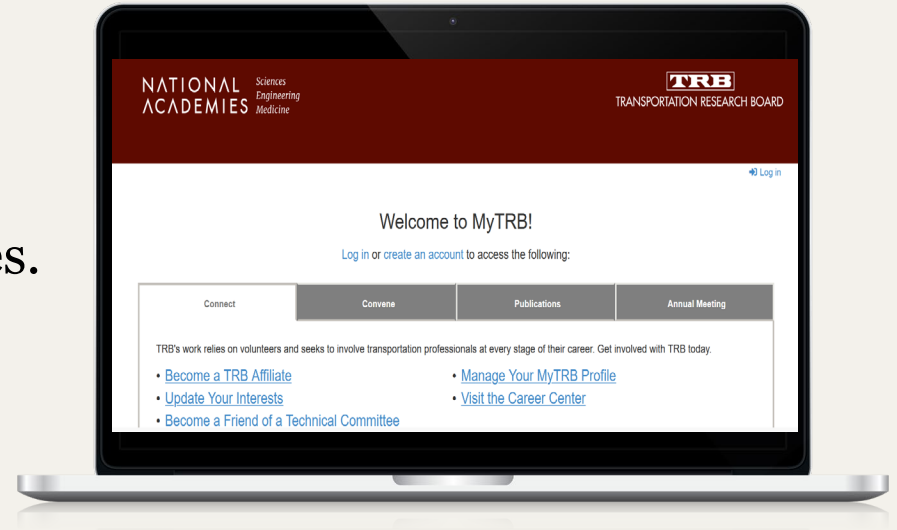

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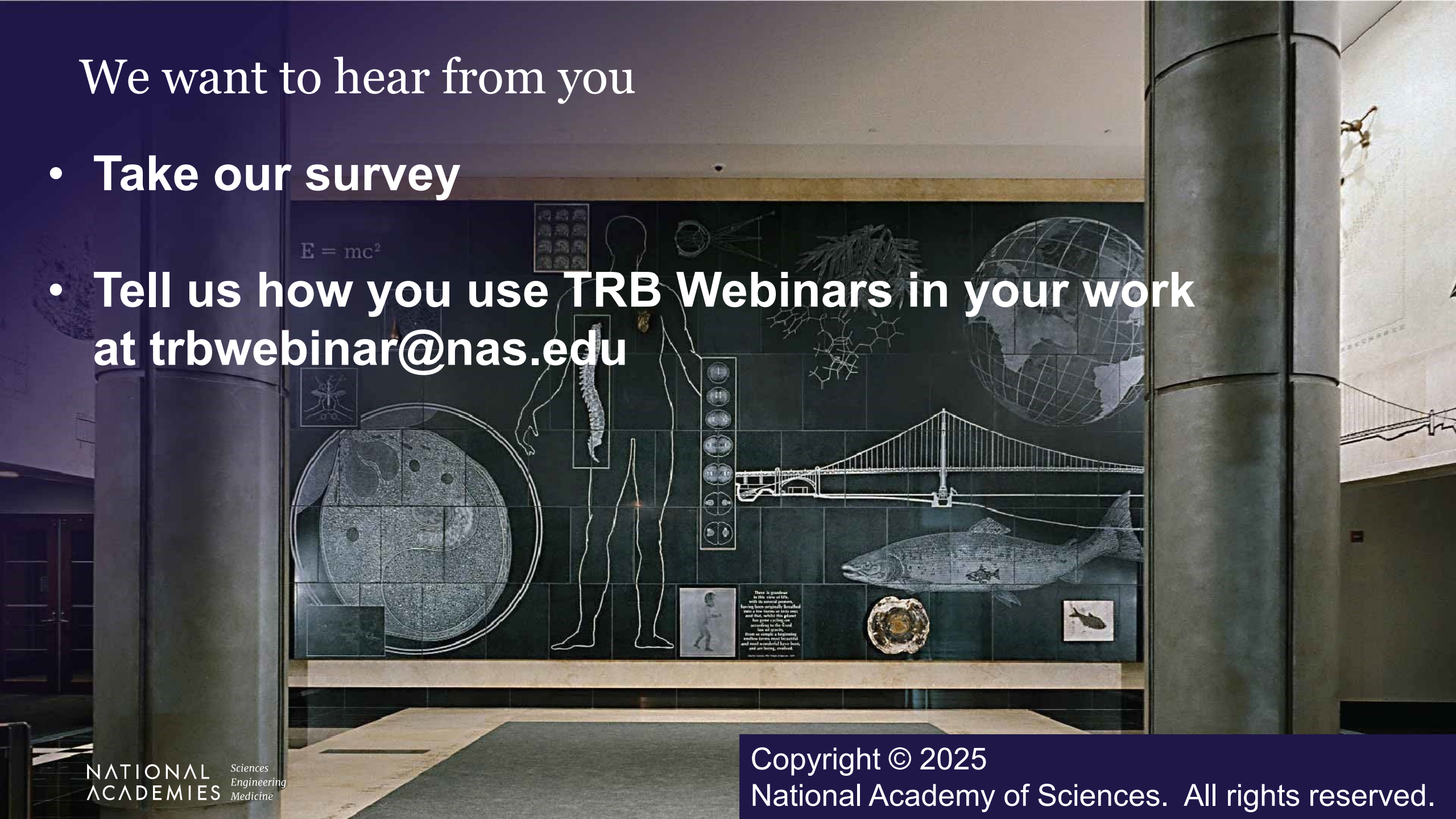

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