

# MobilityData

## Developing a shared data language for transportation

Aaron Antrim

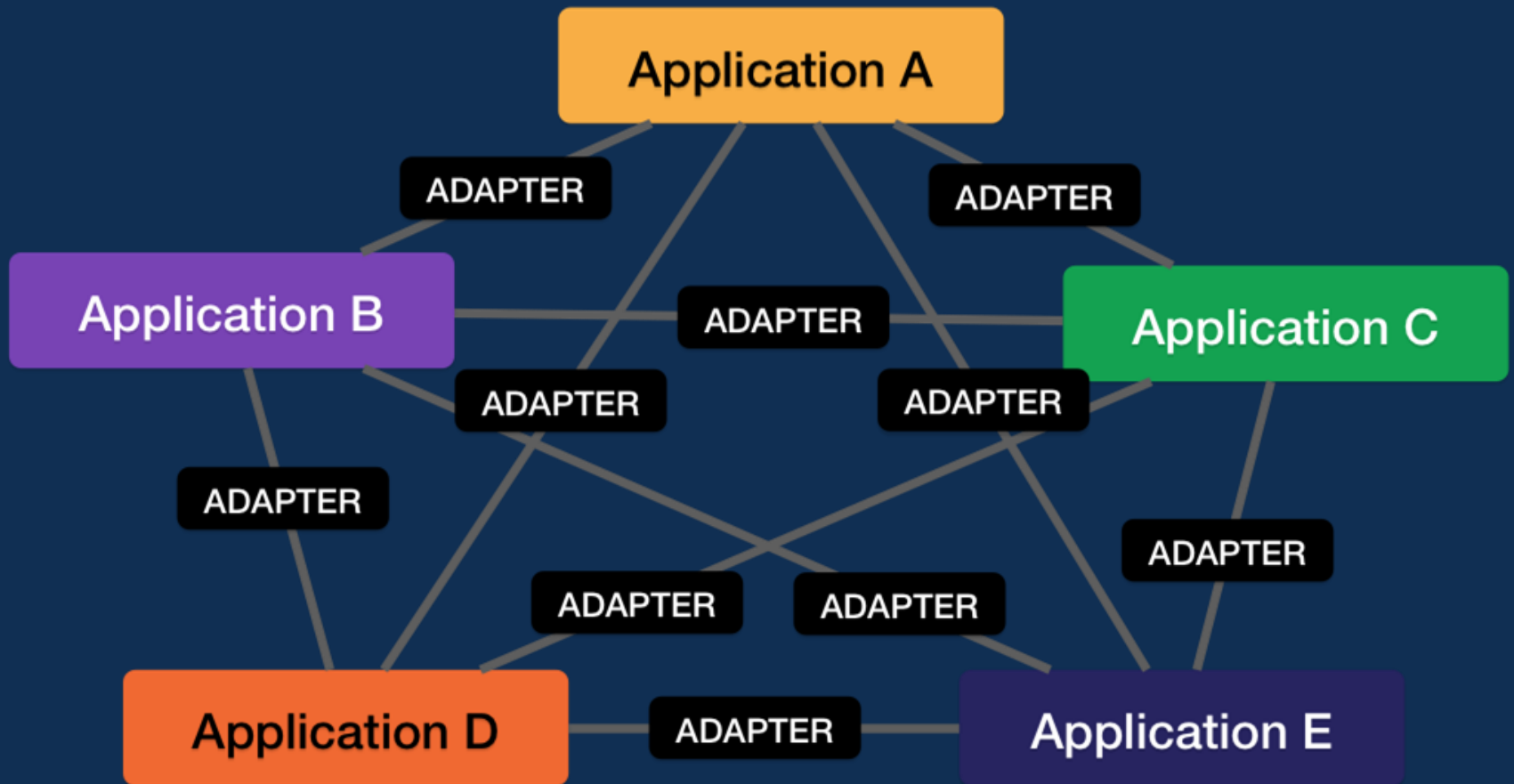
ITS Canada Webinar, Dec 17, 2018

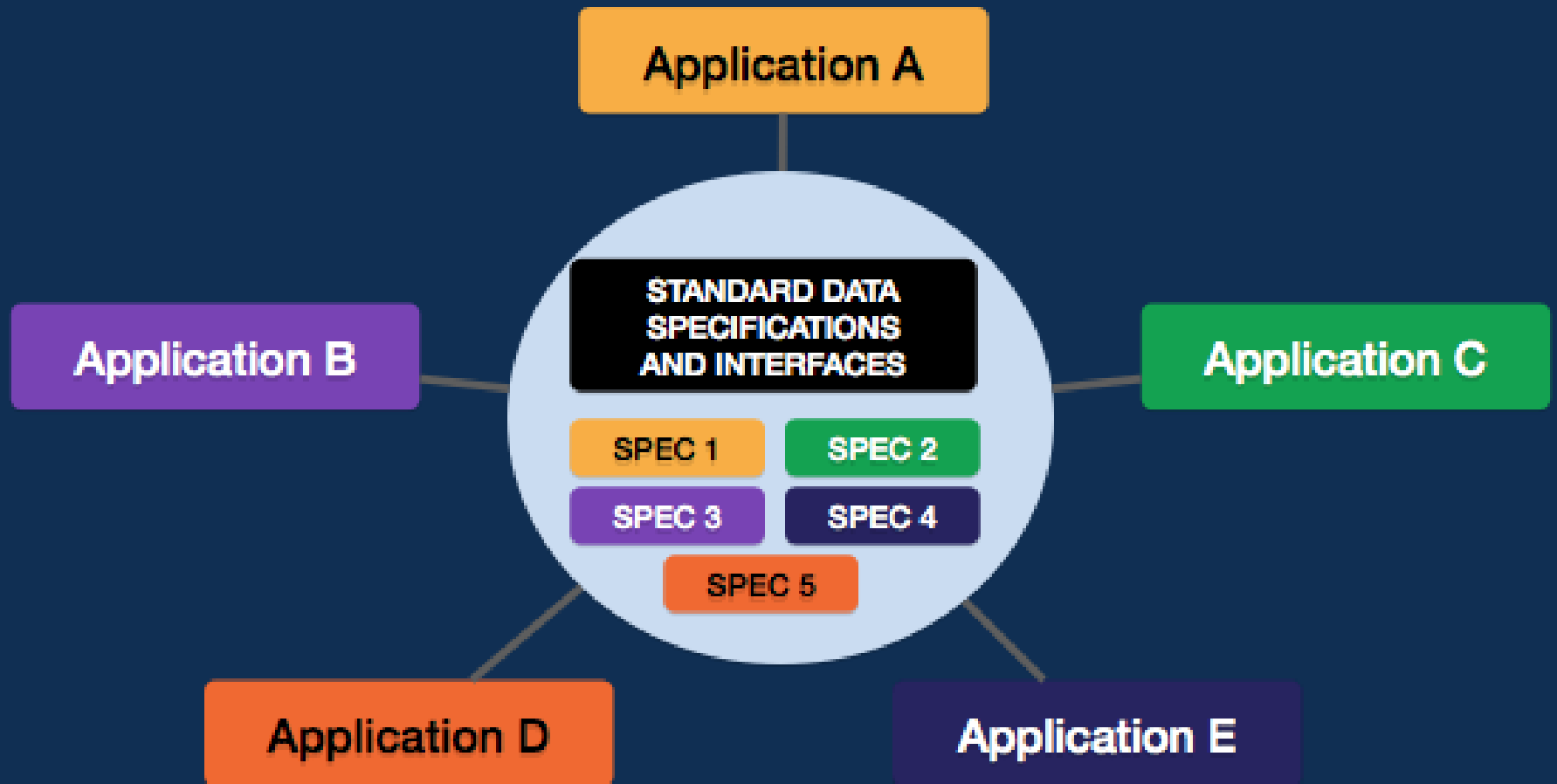
New Horizons in Standardized Traveler  
Information for Integrated Mobility

How do we make the seams less visible?

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**With interoperable data and systems.**





# A world without interoperable data and interfaces...

No choice of:

~~Web browsers~~



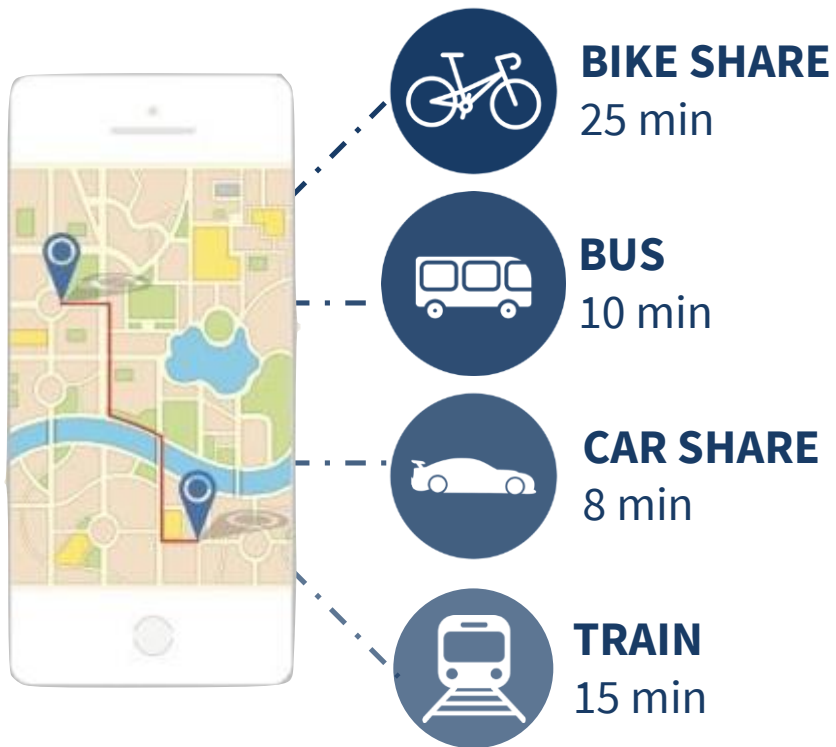
~~Email clients~~



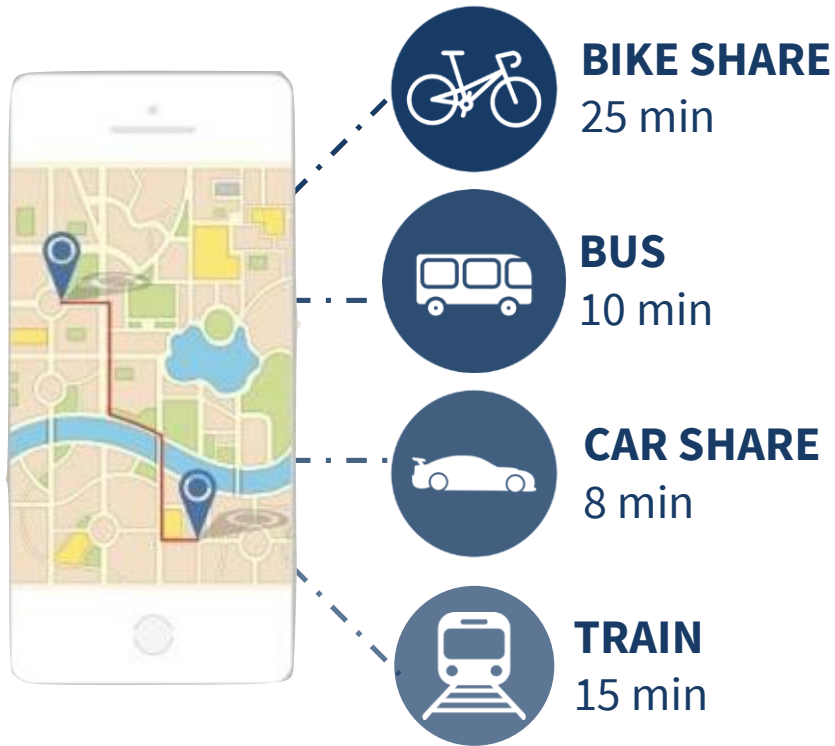
~~Transit apps!~~



~~Also: Banking, travel booking, phones~~



For Maas, we need more complete data streams.



Complete data is the key to make the multimodal transportation network **greater than the sum of its parts.**



Fixed-route transit

GTFS, GTFS-realtime



DRT, Ride-hailing,  
taxis, paratransit

Vendor-specific APIs,  
(*Emerging:*) GTFS-flex, TCRP G-16



Pedestrian network

OpenStreetMap (OSM)



Bikeshare and  
bikeways

OpenstreetMap (OSM)  
General Bikeshare Feed  
Specification (GBFS)



Carpool & Vanpool

?



Payments

Banking system, vendor- and  
agency-specific APIs and SDKs



# Hello, MobilityData



A project of Rocky Mountain Institute

# MobilityData Project Goals

- **Broaden adoption** of standardized formats so mobility data is available throughout the world.
- **Increase completeness** of data formats so that more service features can be represented in apps.
- **Enhance accuracy and quality** of data to ensure that the information travelers see in an app matches the real world.

Producing applications



GTFS



Consuming applications

**Traveler-facing:**

Trip planners  
Mobile apps  
Timetables

**Internal:**

Performance measurement  
Network analysis

## How we are doing this:

- Making GTFS more clear
- Add features to GTFS
- Make research easier to access

Add features to GTFS to describe more transit services and features:

- Demand-responsive transit (DRT)
- Service changes, such as detours
- Vehicle and station features for step-free accessible transit
- Fare structures and travel restrictions
- Line & service, and operator names (branding)

## Feature addition process:

1. Gather data producers and consumers
2. Establish use cases
3. Develop specifications
4. Observe practice and experiment
5. Repeat!

# Example project: TriMet's OpenTripPlanner

TRI MET

Portland Int'l Airport MAX Station (TriMet Stop ID)

Anna Bannanas, Portland, OR, USA

Today  
Depart 22:48

5 Modes Selected

Take Transit



Walk + Transit



Bike + Transit



Park & Ride



Uber + Transit



Lyft + Transit



car2go + Transit

Walk Only

Bike Only

Filter Transit Modes



Bus



MAX & Streetcar



Wes



Aerial Tram



[trimet.org/MOD](https://trimet.org/MOD)

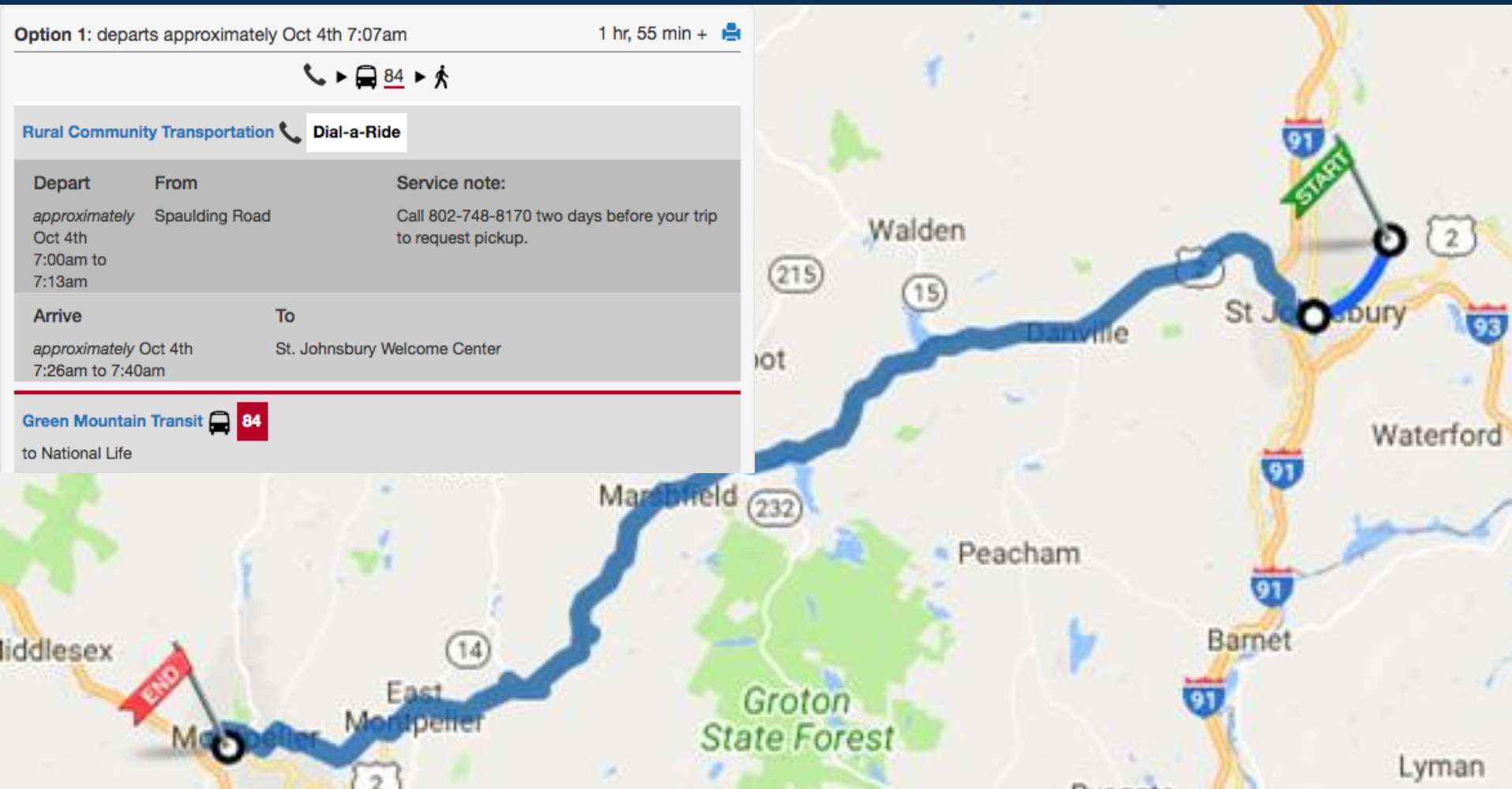
# Demand-response transit doesn't (currently) exist in Google Maps

*Sorry, we could not calculate transit directions from "1265-1785 Spaulding Rd, St Johnsbury, VT 05819" to "1 National Life Dr, Montpelier, VT 05602"*





# Example project: Vermont's “flexible” trip planner



Using GTFS-flex ([gtfsflex.com](http://gtfsflex.com))

Mobility**Data** for transit agencies —

Leverage standards by requiring them in procurement documents:

GTFS [gtfs.org](https://gtfs.org)

GTFS-realtime 2.0 [bit.ly/gtfs-realtime-v2-blog](https://bit.ly/gtfs-realtime-v2-blog)

GTFS-flex [gtfsflex.com](https://gtfsflex.com)

GTFS Best Practices [gtfs.org/best-practices](https://gtfs.org/best-practices)

# MobilityData

## Questions?

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# MobilityData

## Get involved

[mobilitydata.org](https://mobilitydata.org)

[hello@mobilitydata.org](mailto:hello@mobilitydata.org)