

# MnDOT Mobility-as-a-Service innovation project

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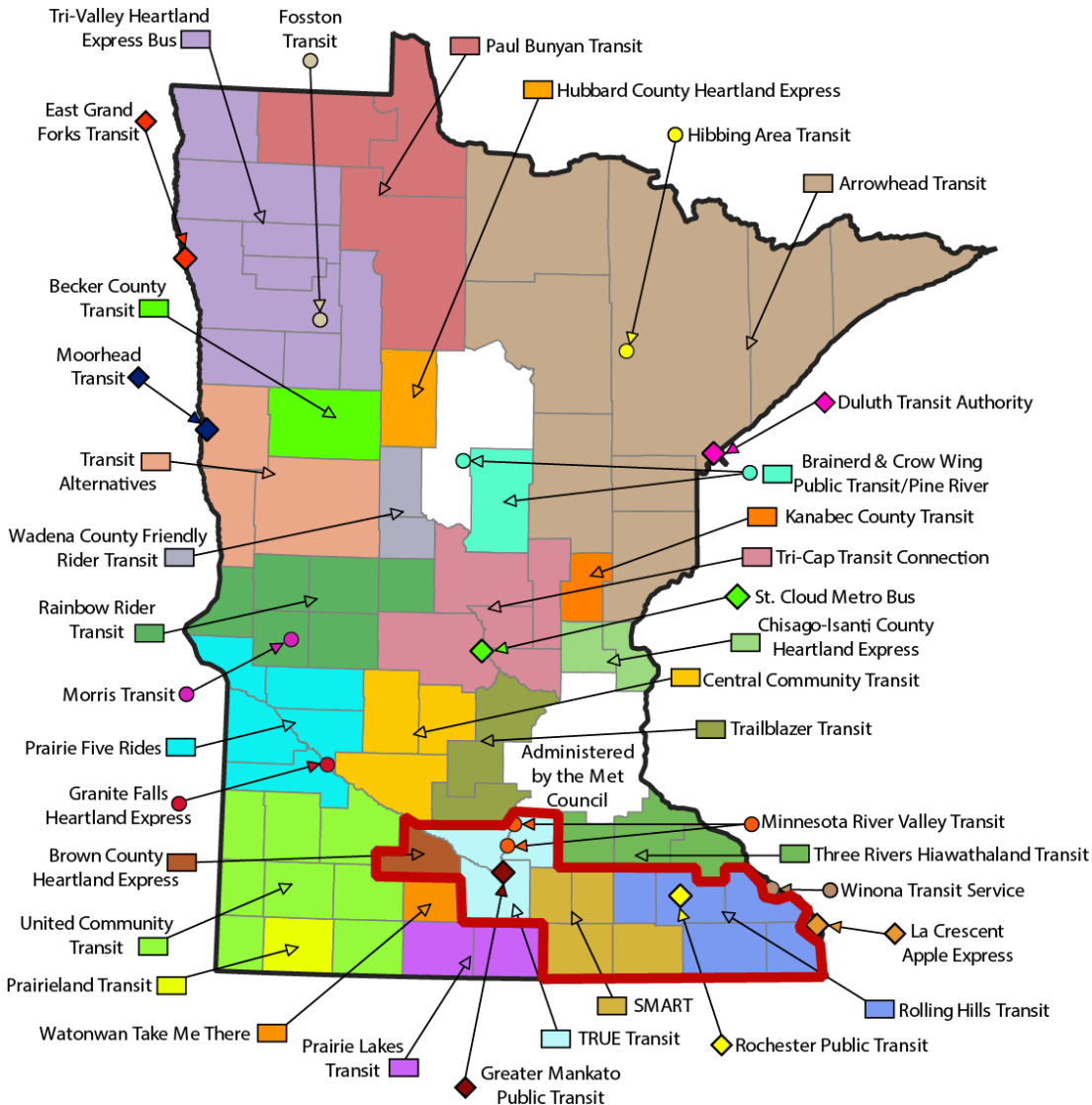
7/26/2023

# What MaaS looks like

- Mobility as a Service vision: a single platform that provides access to all shared mobility options, allows trip planning, fare payment, and real time updates on trip information
- Integration of transit planning and ticketing with private shuttles and buses, taxis, TNCs, bike and scooter share, van pool, carshare, shared CAV, and new emerging shared mobility technologies
- Pilot will focus on 7 transit systems plus private providers in Southern Minnesota



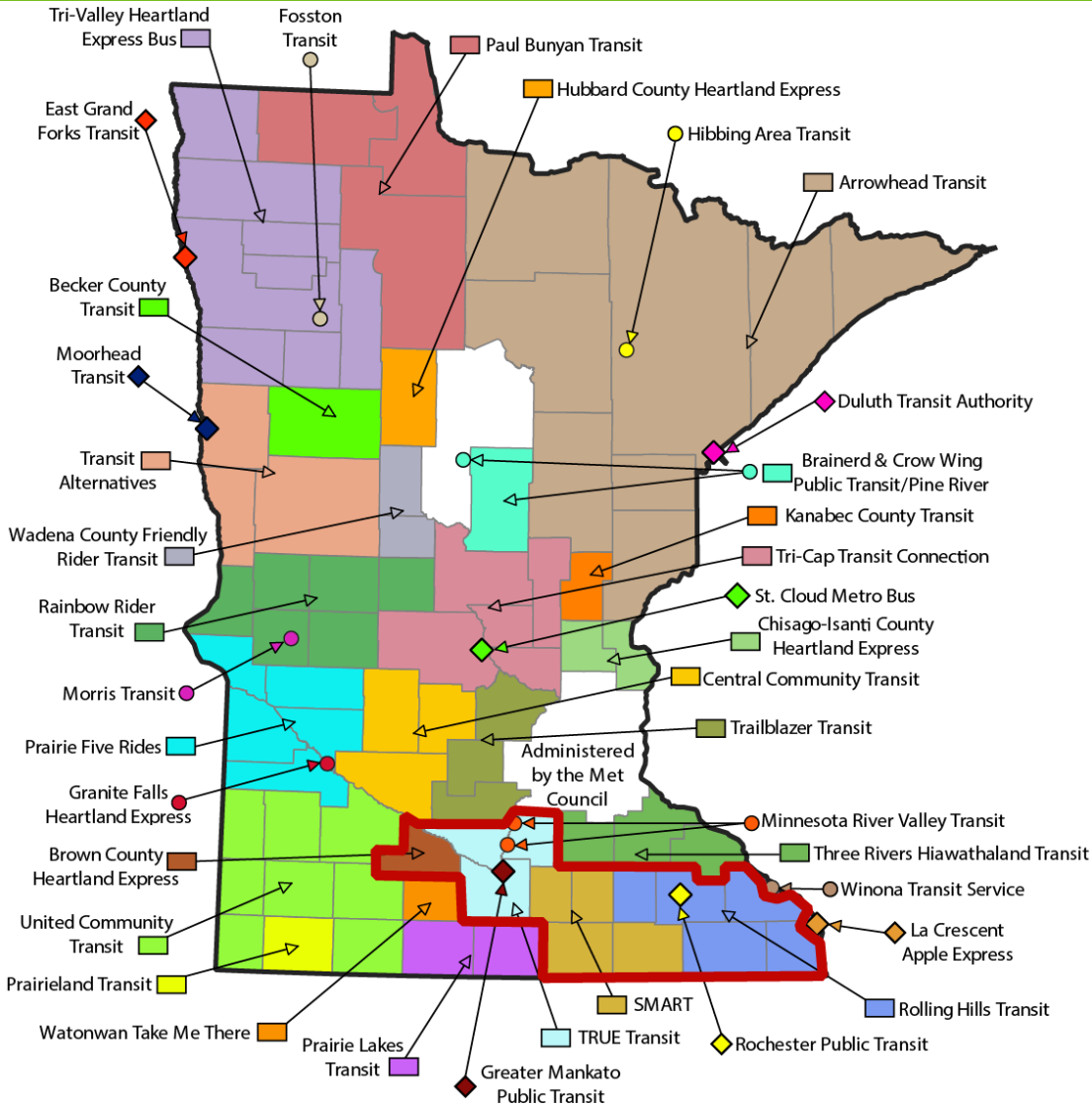
# Southern Minnesota MaaS Project Area



## 7 Greater Minnesota Transit Systems

- Rochester Public Transit
- Mankato Public Transit
- Brown County Heartland Express
- Minnesota River Valley Transit
- Rolling Hills Transit
- SMART
- TRUE Transit

# Southern Minnesota MaaS Project Area



## Additional providers

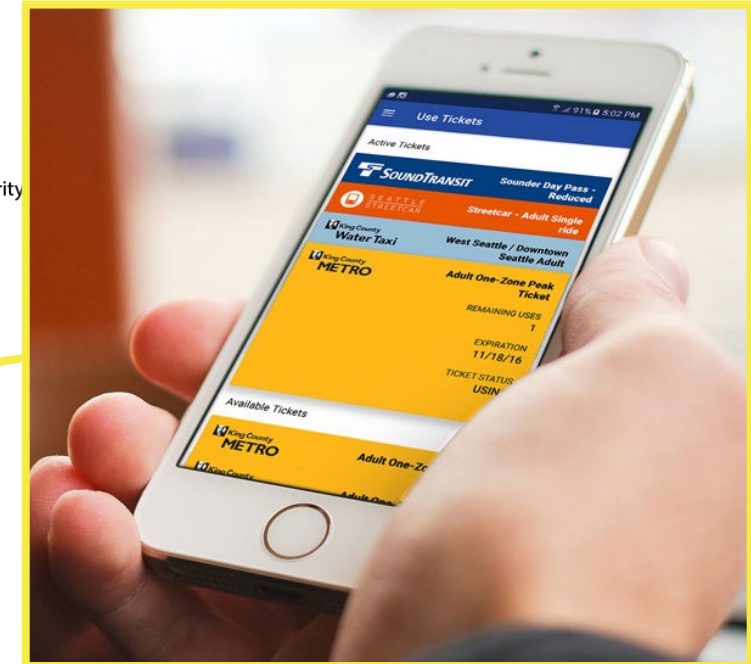
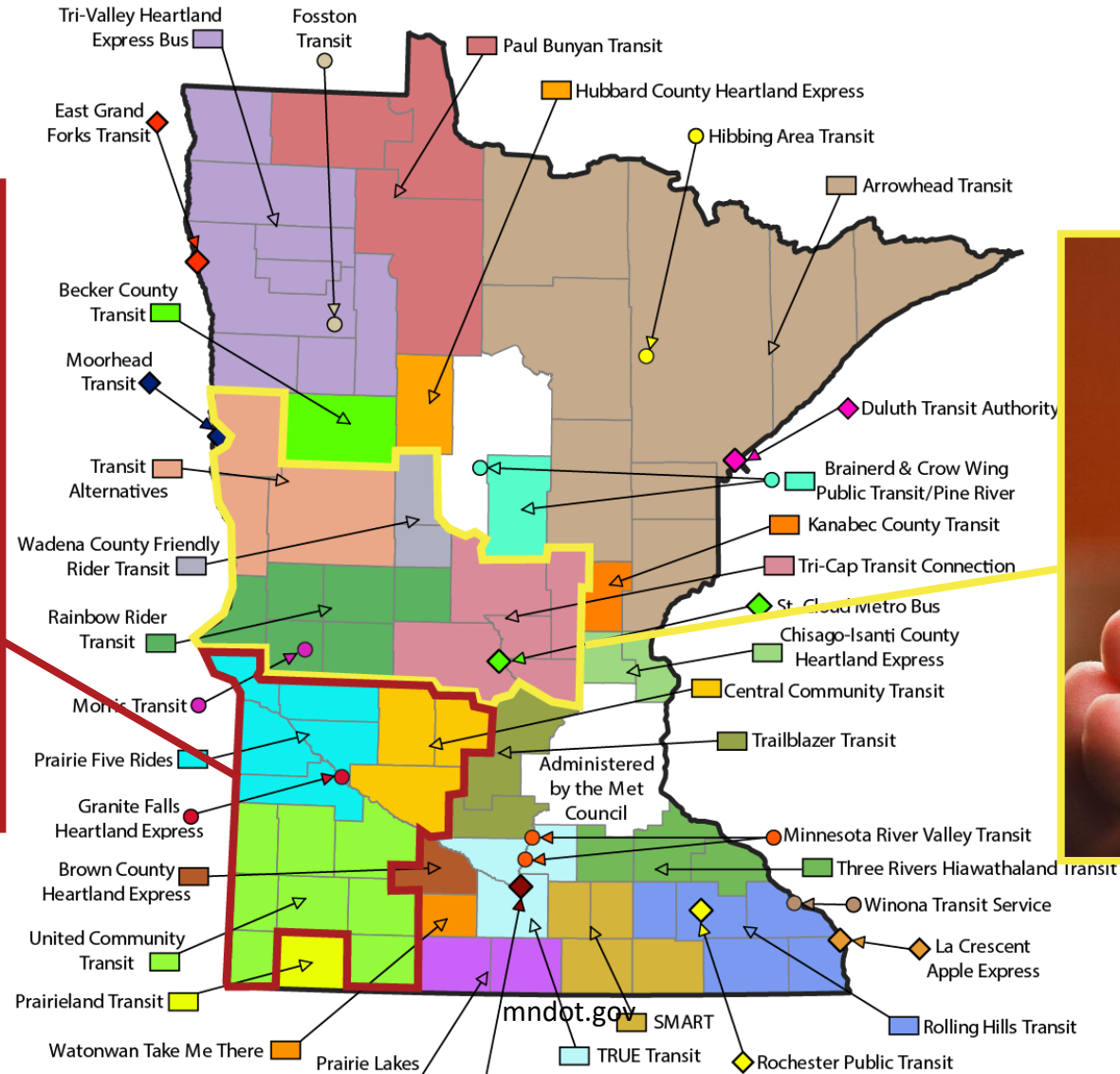
- Metro Transit
- Jefferson Lines/Land-to-Air
- Additional taxi, rideshare, private bus, van pool, scooters, etc.

## Existing dispatching/scheduling vendor

- CTS Software (TripMaster)



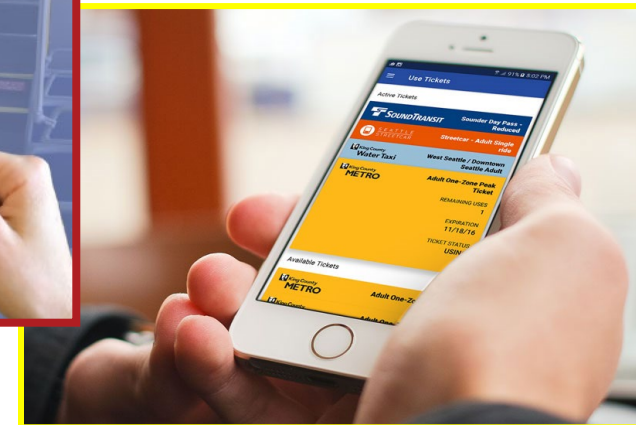
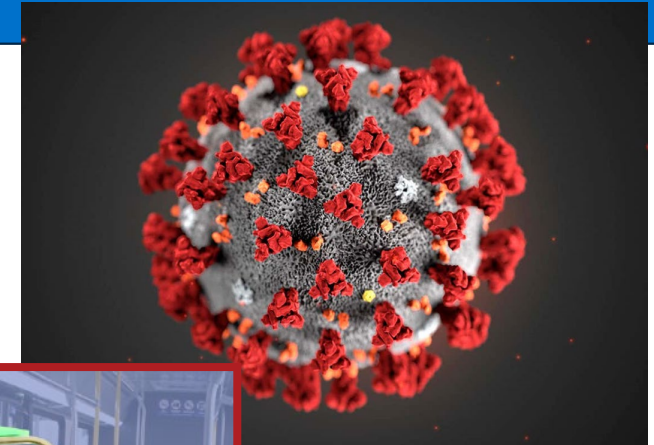
# Western Minnesota Contactless Payment Project



# Contactless payment and measuring public confidence

- MnDOT testing the impact of different forms of contactless payment on public confidence in safety of transit
- Three rural transit agencies currently implementing fare card-based tech
- FTA grant funds mobile only ticketing option for additional rural agencies to compare tech
- Trip planning app also included in testing

 Federal Transit Administration



# Project Partners

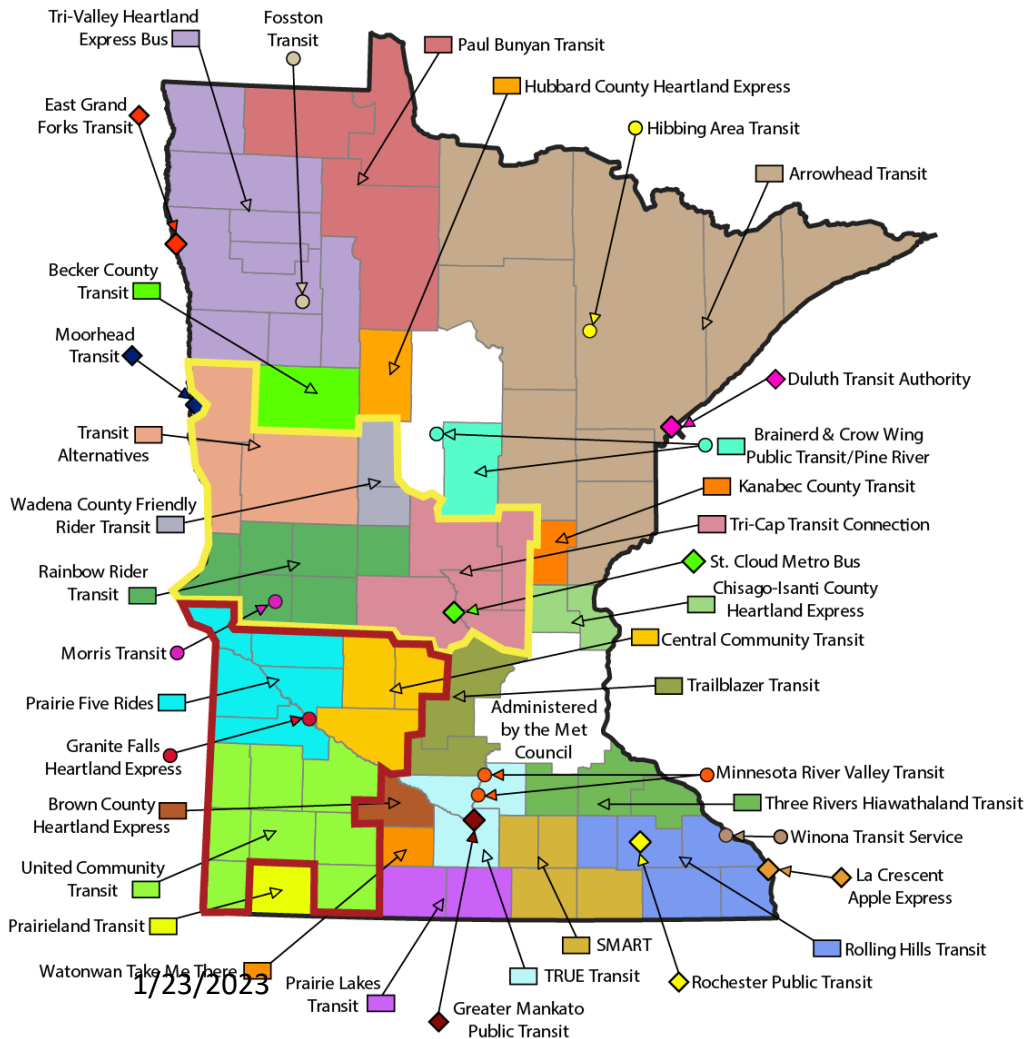
## 6 Rural (5311) Greater Minnesota Transit Systems activating initial pilot

### Mobile Ticketing

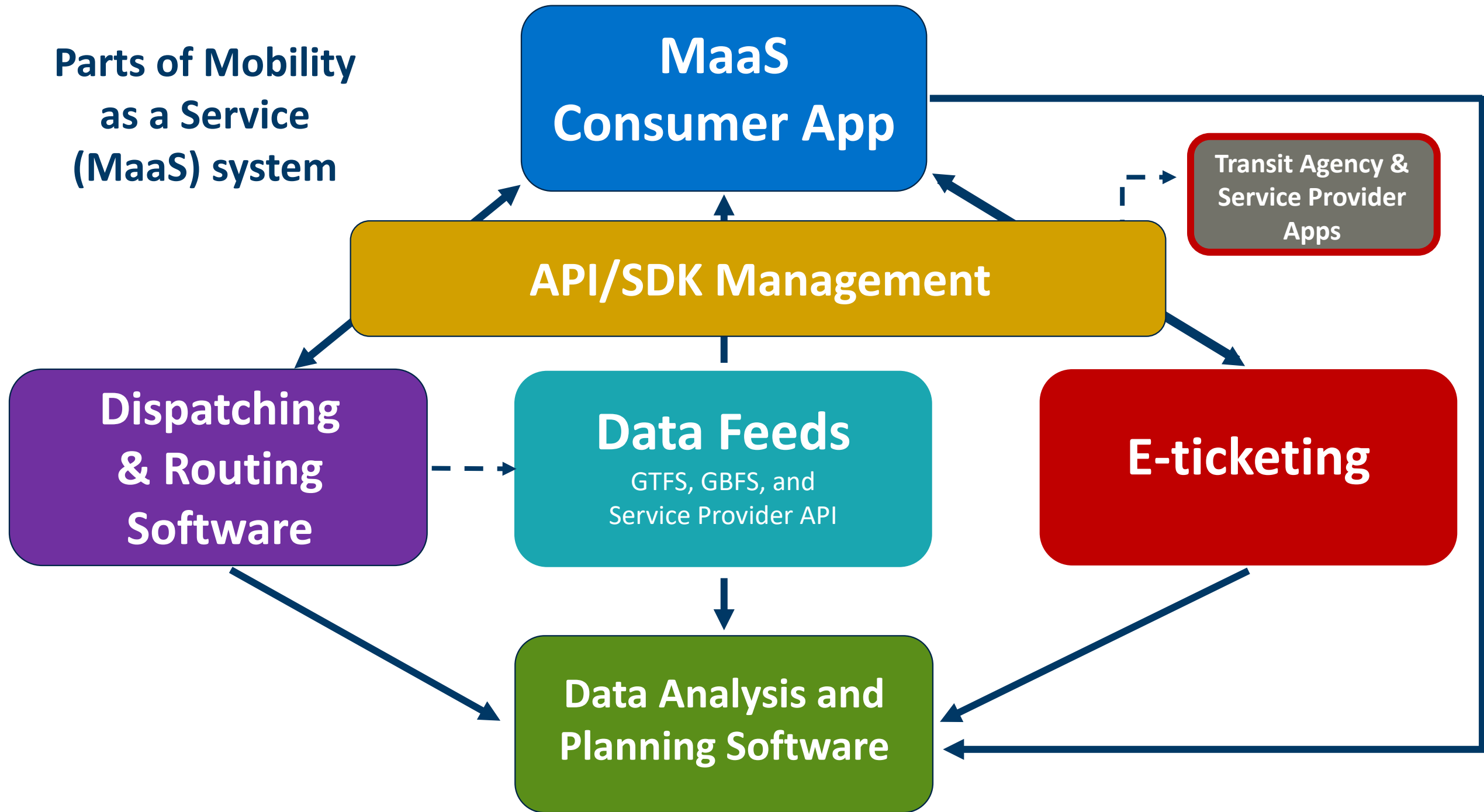
- Morris Transit
- Transit Alternatives
- Tri-cap Transit Connection

### Fare Card with Genfare

- Central Community Transit
- Prairie Five Riders
- United Community Transit



**Parts of Mobility  
as a Service  
(MaaS) system**





# Selected vendor and tech team

## Lead Vendor and API Integrator



MaaS App



GTFS Development



E-ticketing



# Parts of Mobility as a Service (MaaS) system

**MaaS App**  
 transit


 **API/SDK Management**

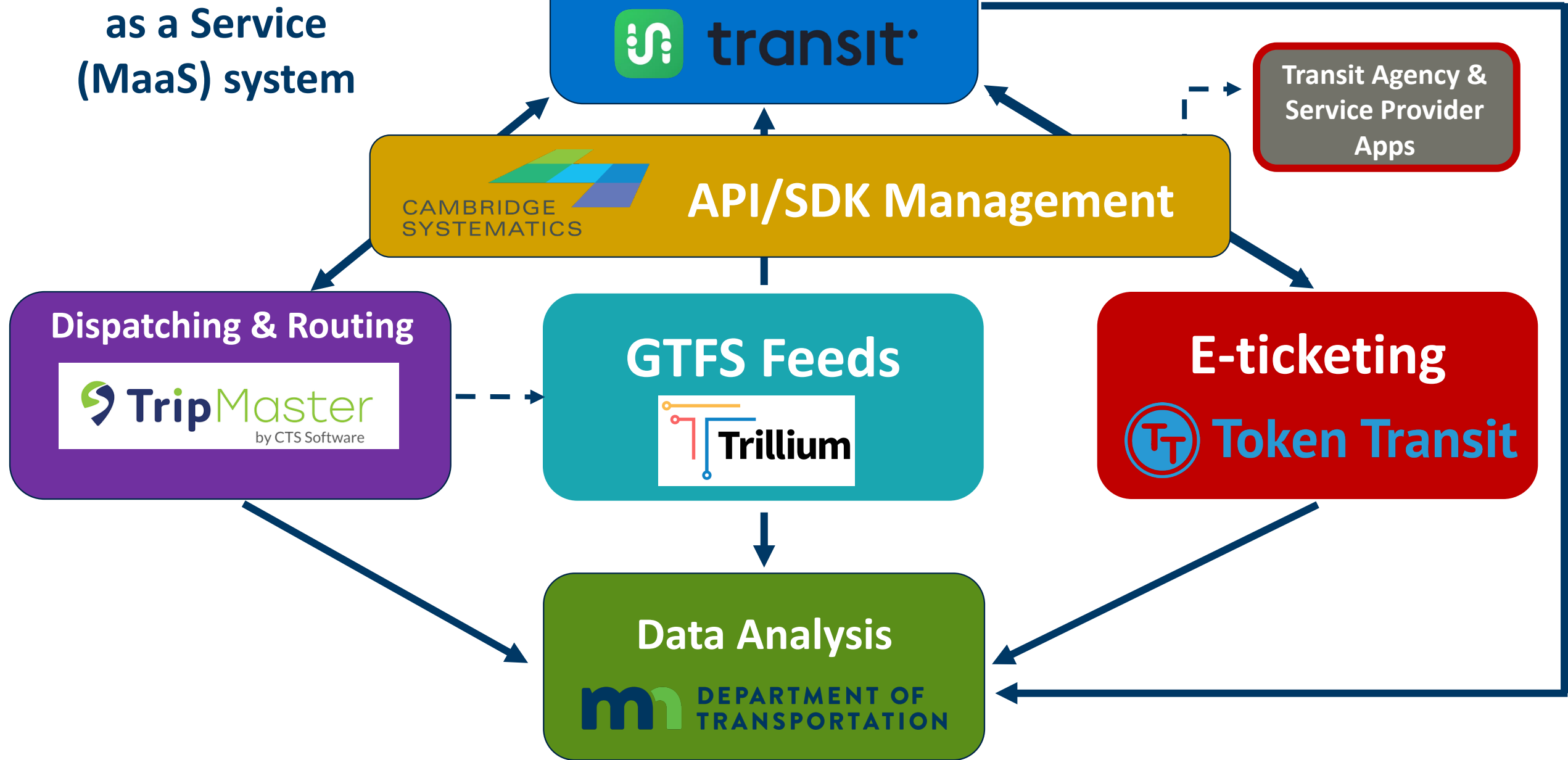
Transit Agency &  
Service Provider  
Apps

**Dispatching & Routing**  
 TripMaster  
by CTS Software

**GTFS Feeds**  
 Trillium

**E-ticketing**  
 Token Transit

**Data Analysis**  
 m1 DEPARTMENT OF TRANSPORTATION

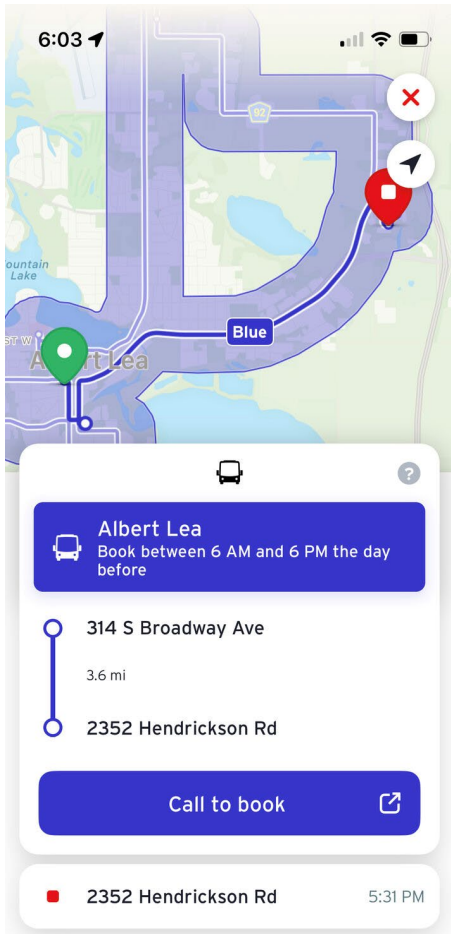


## Planned data spec implementation

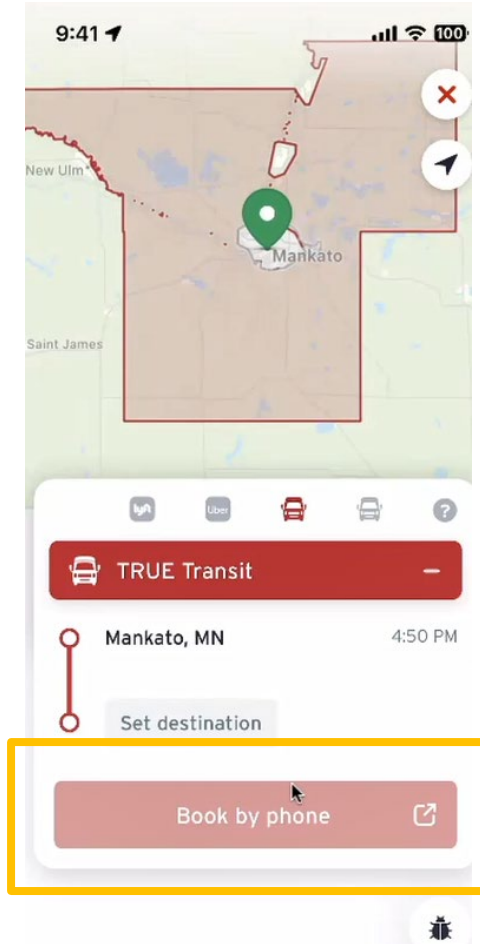
- General Transit Feed Specification (GTFS)
  - GTFS data feeds for all participating transit
  - First major trip planning app to include GTFS-Flex in trip planning engine for demand response/paratransit
  - Open Trip Planner supports GTFS-Flex for other apps
- Development and testing of Demand Response Transactional Data Spec (TDS) as part of demand response booking integration



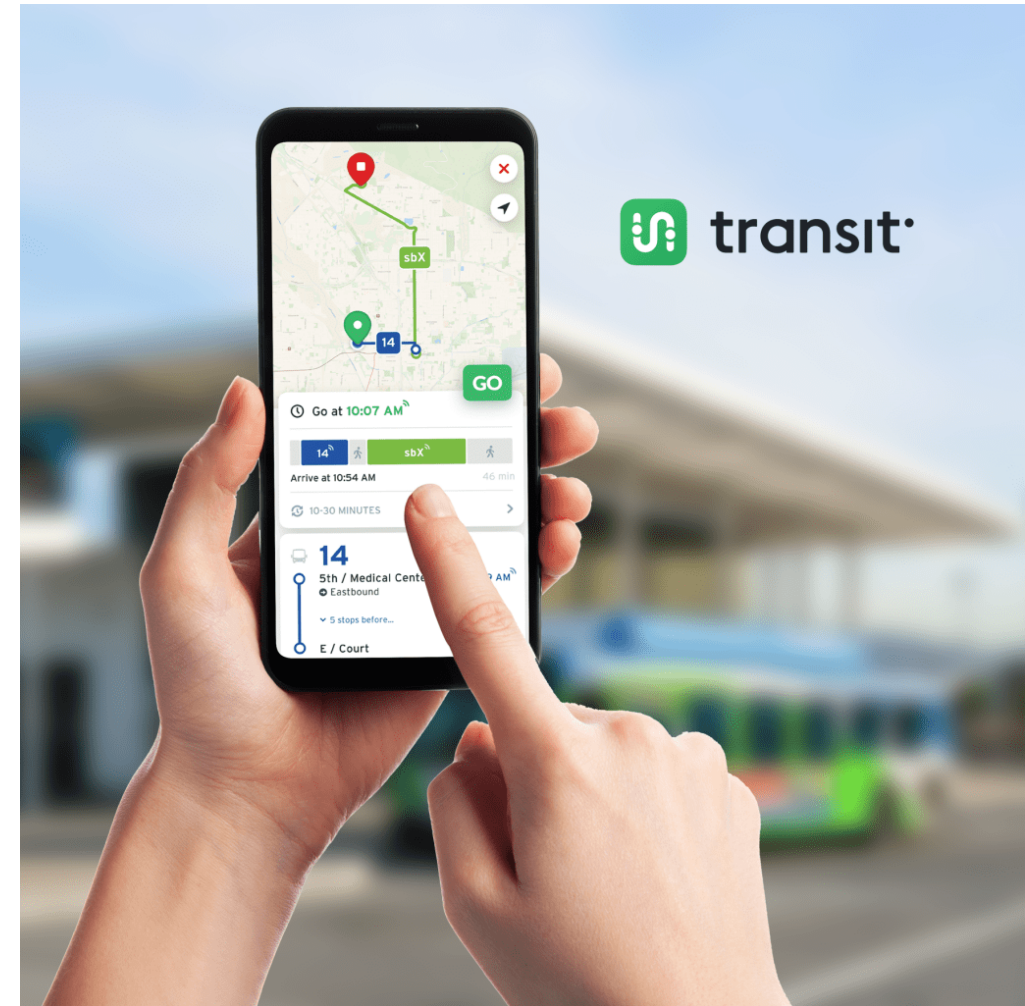
# Examples of non-fixed route searches



Deviated Route



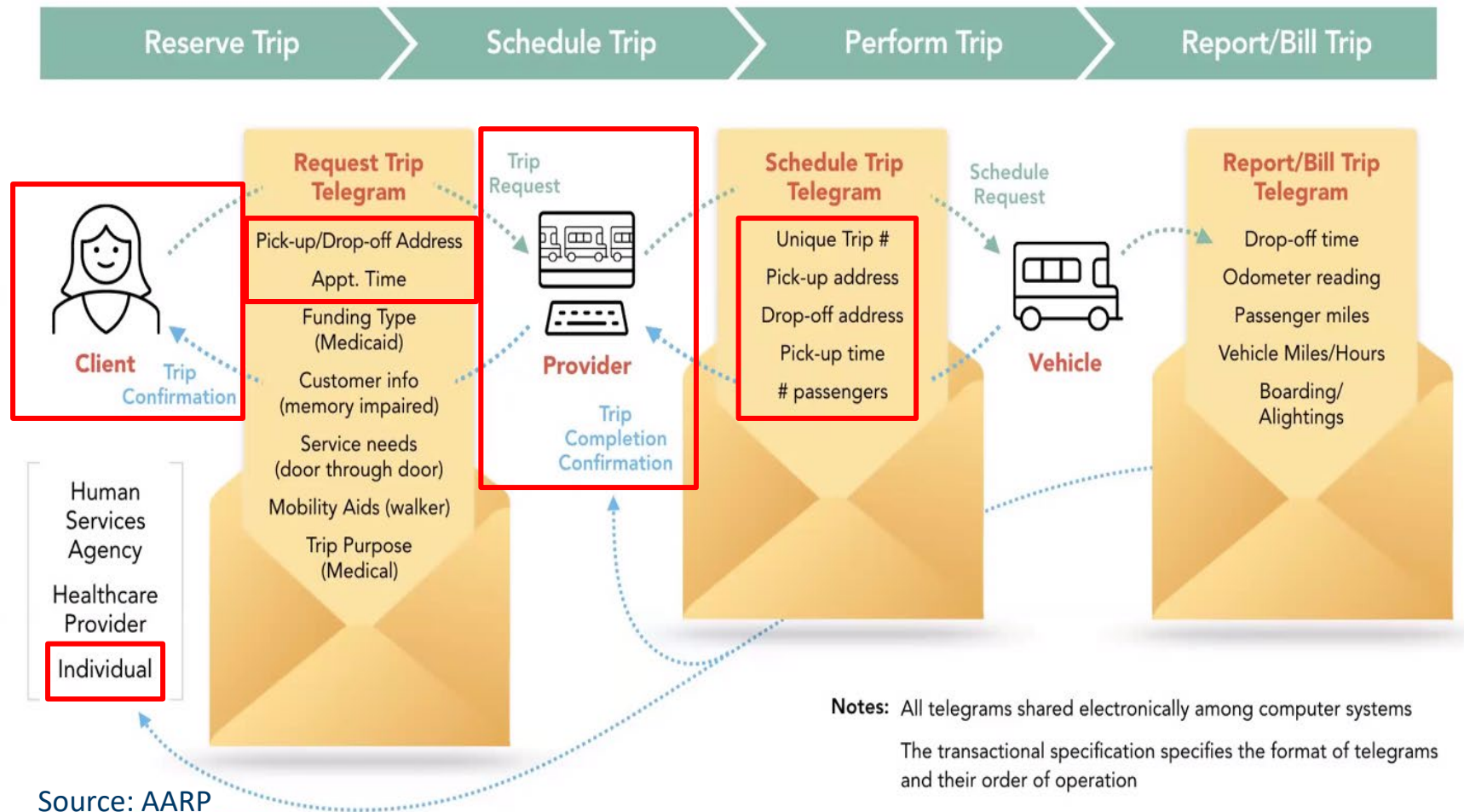
Demand response





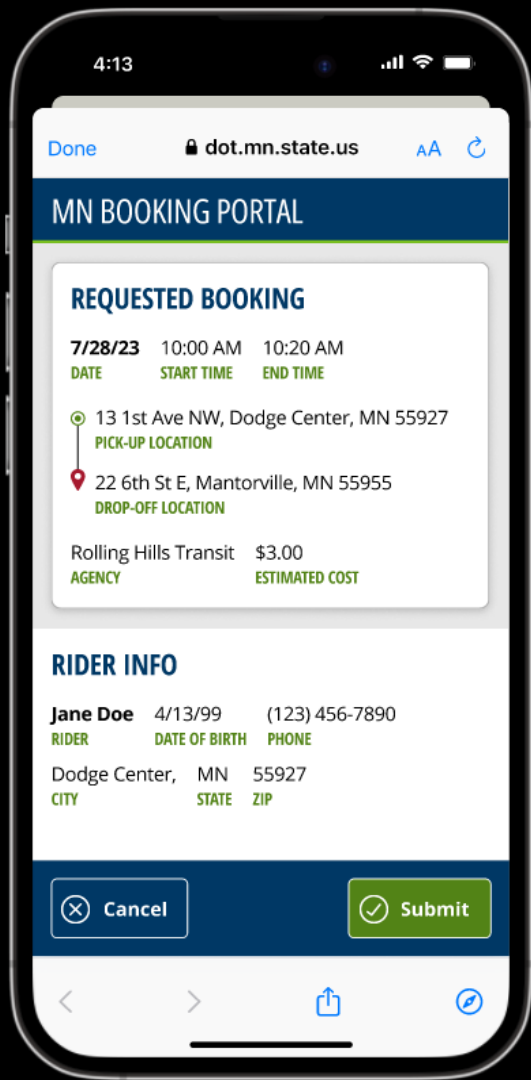
# Planned TDS functionality in project

## Trip Cycle Supported by Data Specification

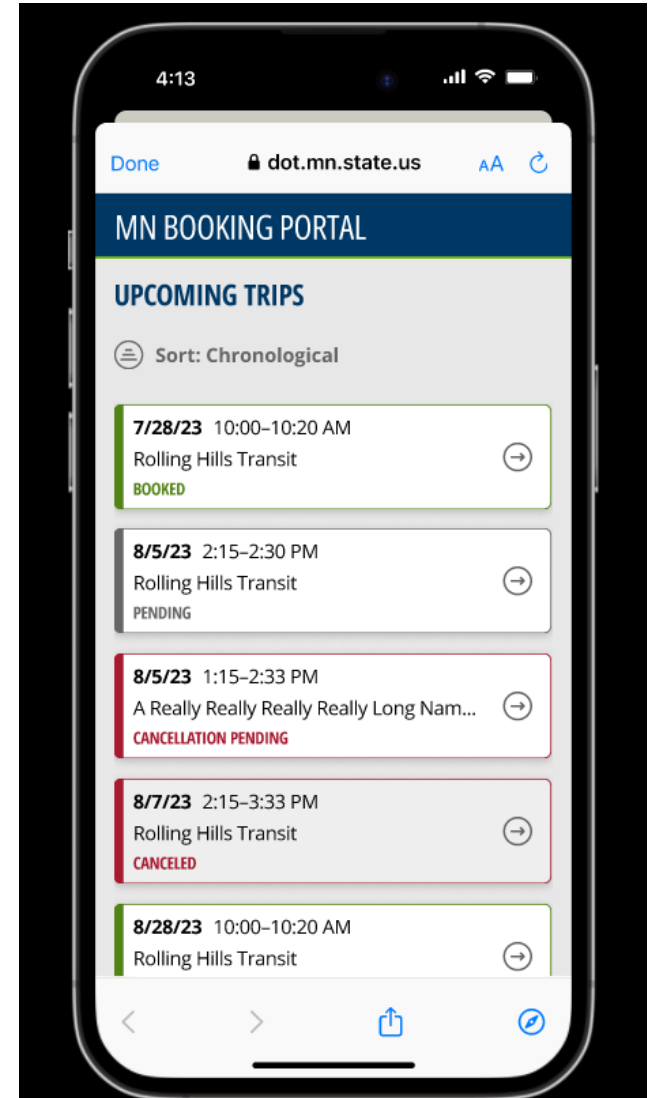
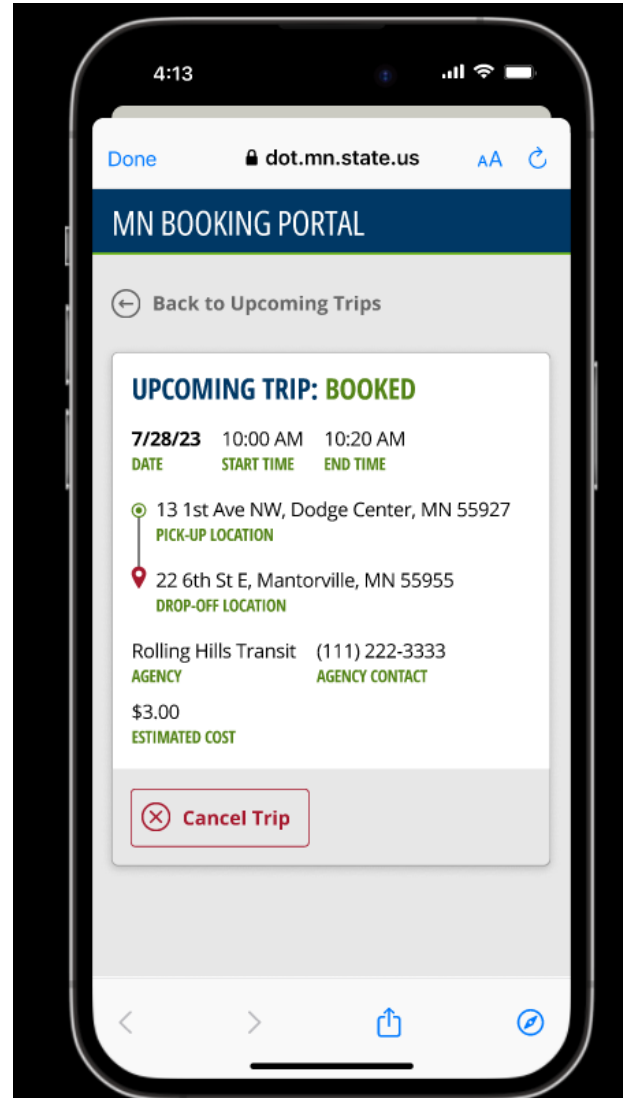




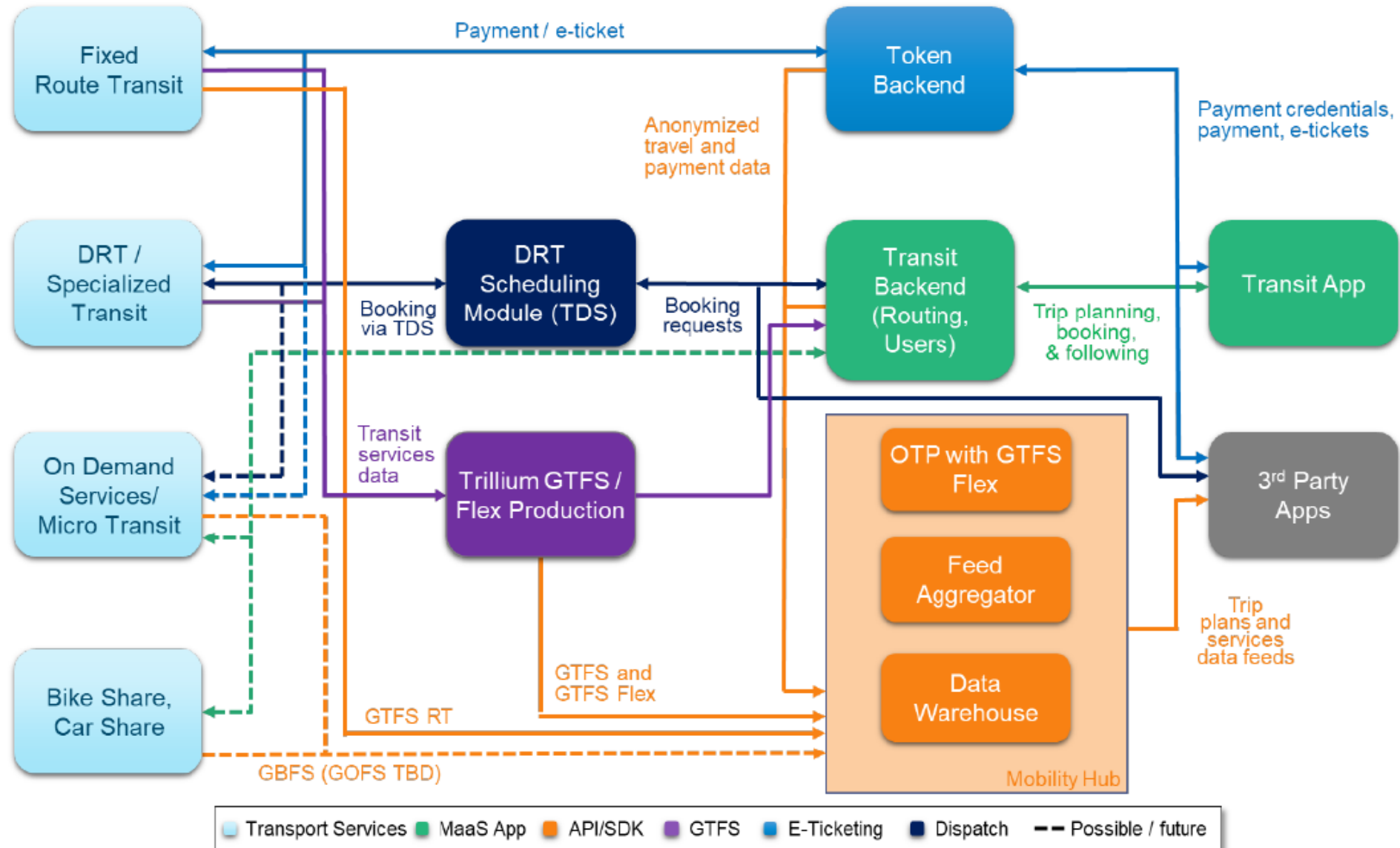
# Demo of potential TDS module



*Images are informational. Actual TDS module still under design.*

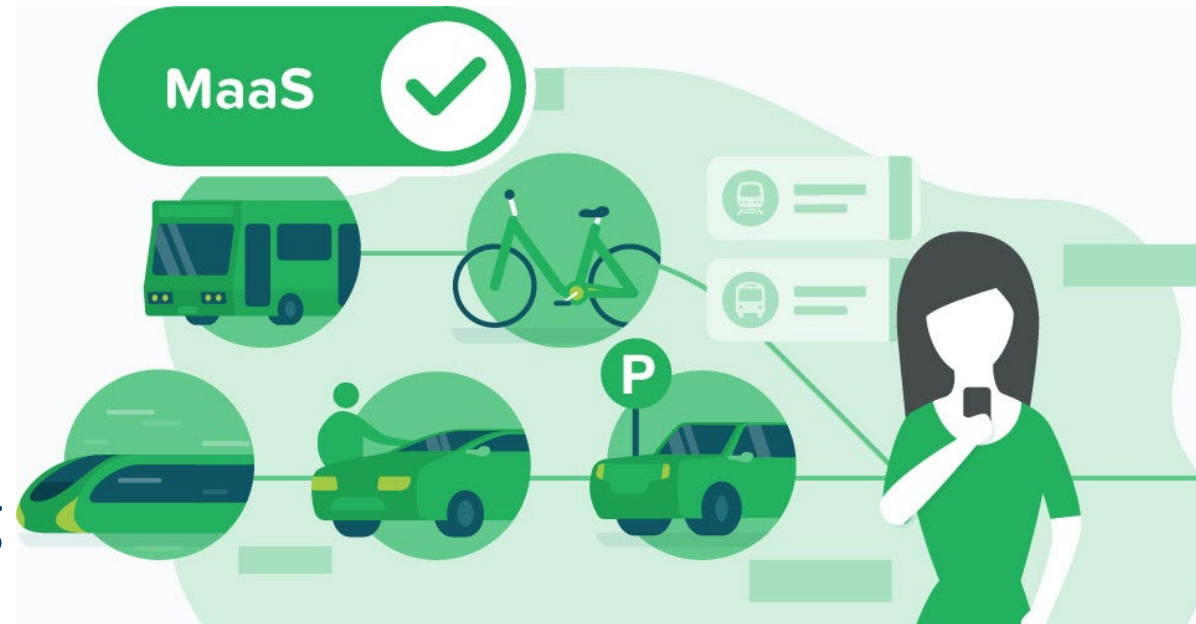


## Appendix A. Conceptual General MaaS Diagram



## Current Project Timeline

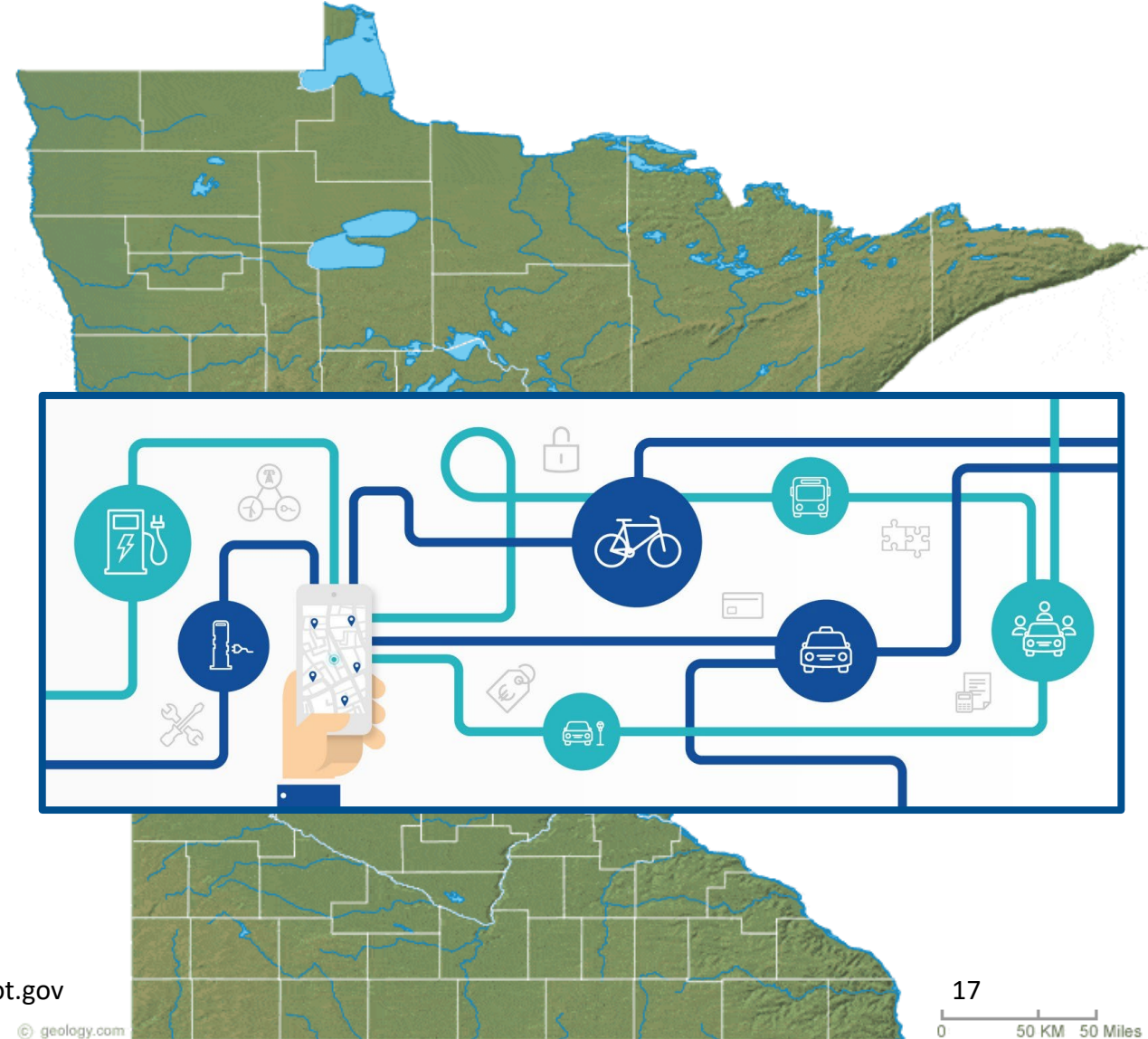
|            |   |
|------------|---|
| May 2022   | Work begins                                     |
| Mar 2023   | Public launch of trip planning/mobile ticketing |
| Aug 2023   | Web-based trip planner                          |
| Oct 2023   | Demand response booking integration available   |
| April 2024 | End of pilot                                    |



# Future Improvements

## Next Steps: 2024 and Beyond

- MnDOT and MNIT evaluate for statewide deployment
- Develop standard for billing transactions and data integration with non-emergency medical and social services
- Integration of parking, tolling, and distance-based fee







# Questions?

