

Mobility-as-a-Service at Minnesota DOT

Elliott McFadden | Greater Minnesota Shared Mobility Coordinator

4/5/2021

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
- Regional MaaS Pilot will focus on 7 transit systems plus private providers in Southern Minnesota

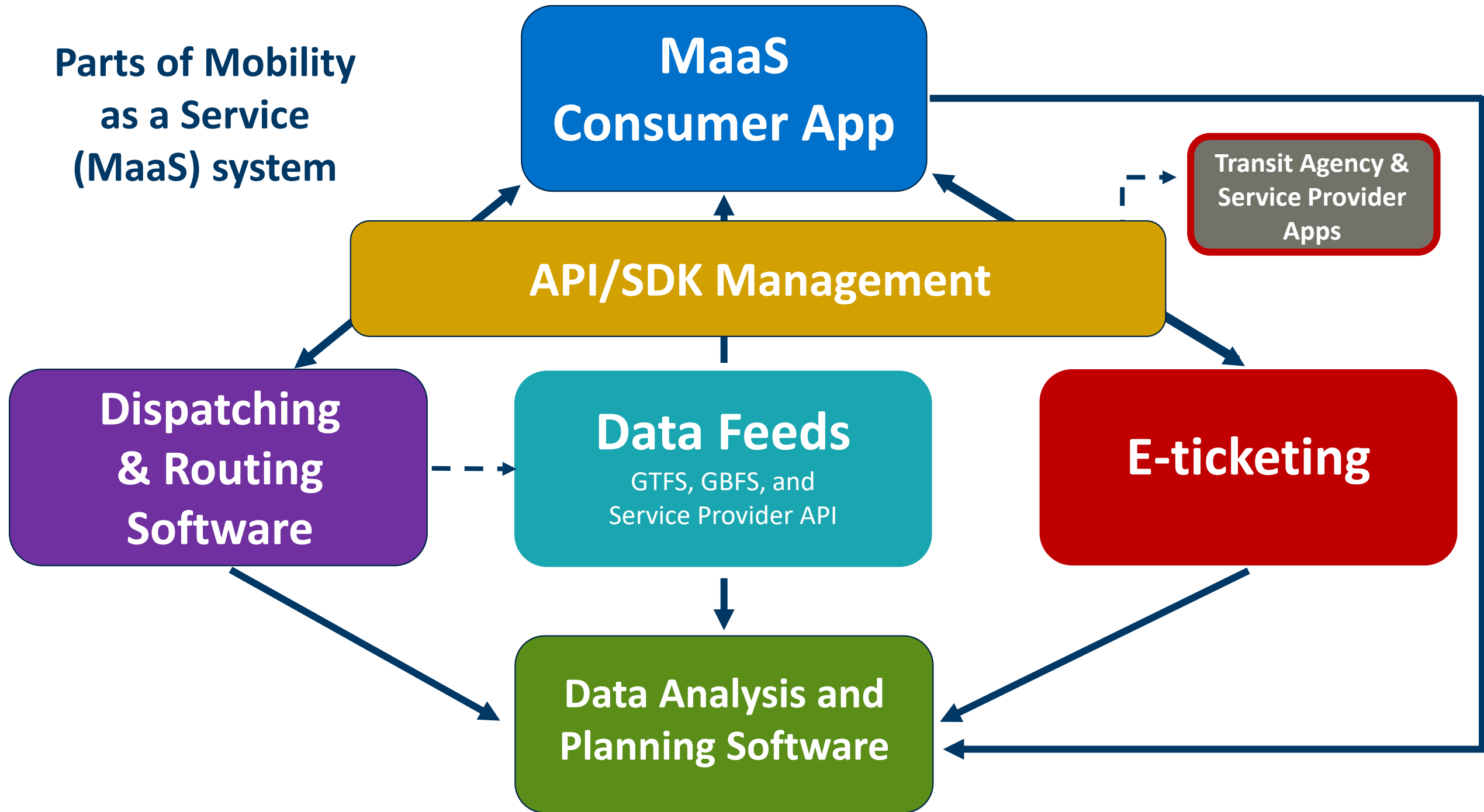


About the AIM Grant

- \$14 million grant fund to support innovation throughout the transit industry by promoting forward-thinking approaches to improve transit system design, service, and financing
- Up to 12 months of development to launch, 12 months of field testing
- 80/20 funding
- Application in May 2020
Award announcement August 2020



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




Planned data spec implementation

- GTFS/GTFS-Flex data feeds for all participating transit *(required)*
- Development and testing of Demand Response Transactional (DRT) Data Spec in partnership with SUMC/AARP workgroup *(required)*
- General OnDemand Feed Specification (GOFS) in partnership with MobilityData workgroup
- Adaptation of General Bike Share Feed Spec (GBFS) to carsharing application

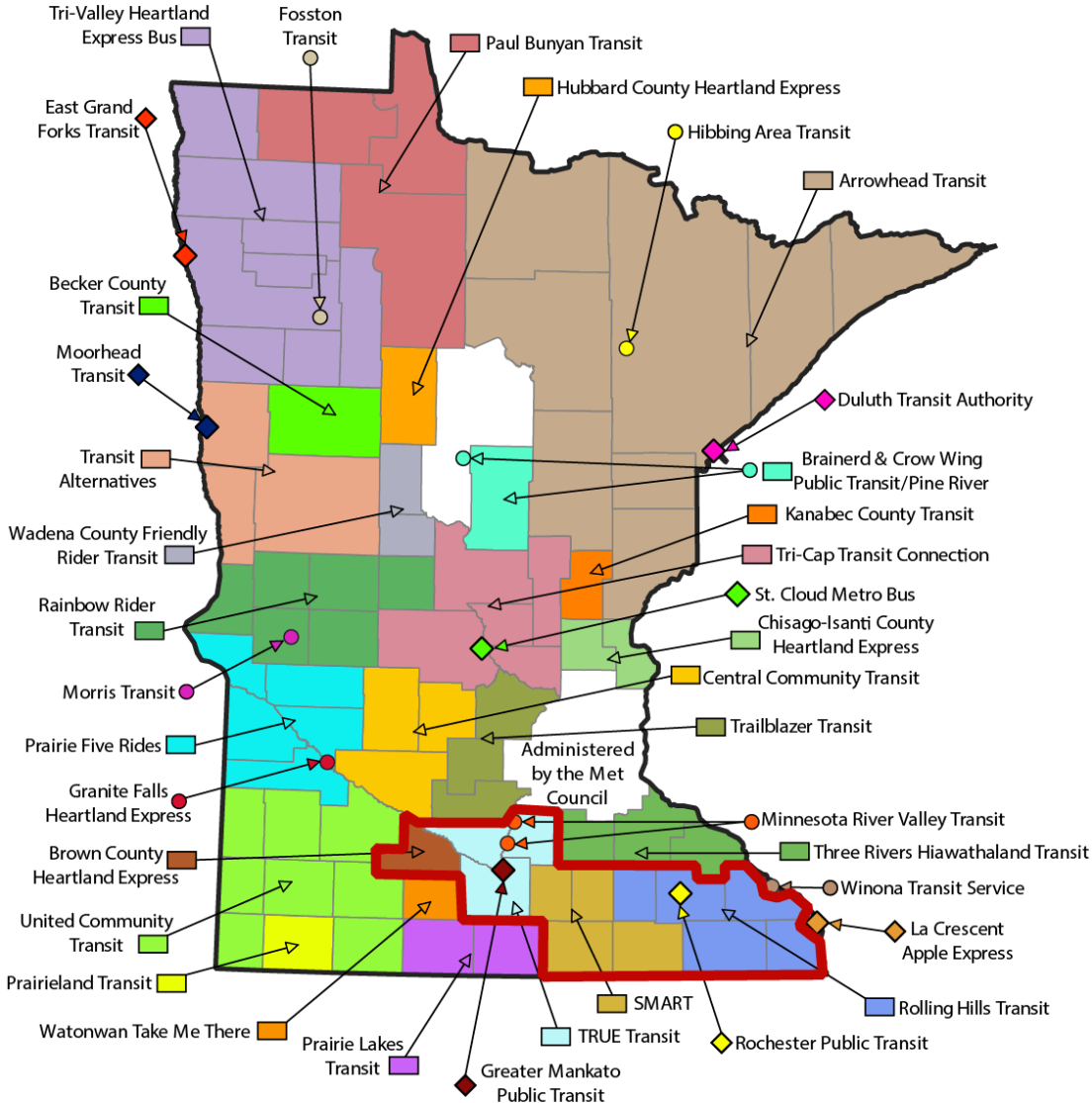


Greater Minnesota Transit Systems

Southern Minnesota MaaS Project

Primary service area 

Coverage area




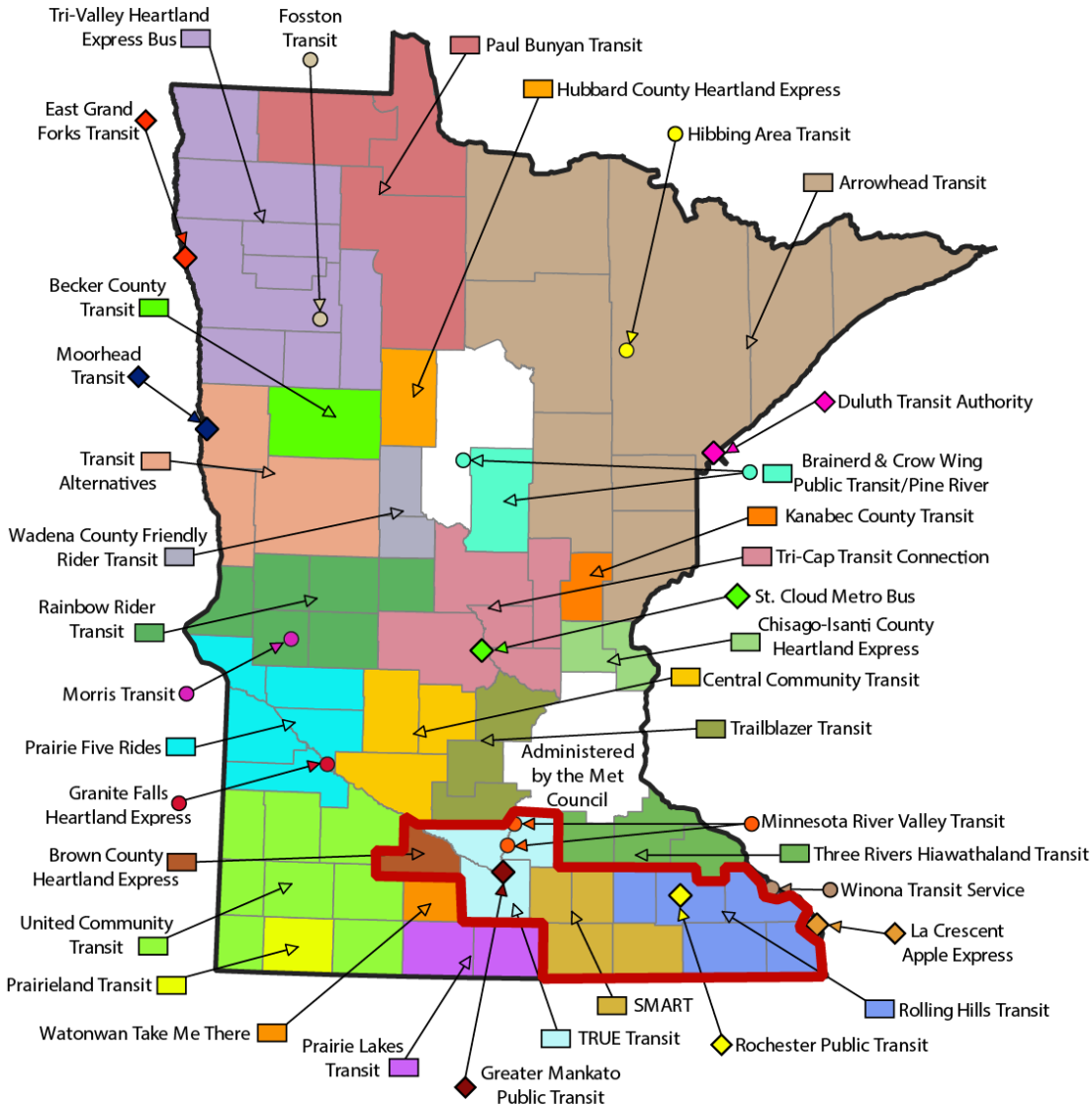
7 Greater Minnesota Transit Systems

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

Greater Minnesota Transit Systems

Southern Minnesota MaaS Project

Primary service area 



Coverage area

Additional providers

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

PLUS

- CTS Software and RouteMatch by Uber



UNIVERSITY OF MINNESOTA



Research Team, led by Assistant Professor Alireza Khani, will study:

- how low-income population can benefit from MaaS
- what extent vehicle miles are reduced due to commuters' mode change
- how people perceive the benefit of the system in time/cost saving and convenience

Pilot costs

The AIM grant will cover:

- Consumer facing app development & ongoing fees
- Open source API/SDK integration
- E-ticketing development and processing fees
- Data analysis & planning software access
- Training and support for partner systems
- Research team
- Marketing to public



Generating GTFS feed for Greater Minnesota

- MnDOT Office of Transit and Active Transportation will be funding development, publishing and maintenance of GTFS & GTFS-Flex feeds for its 35 Greater Minnesota transit systems
- Phase 1: AIM Grant transit systems
- Phase 2: Rest of Greater Minnesota with priority on COVID-19 Research transit systems



Project Workgroups



Implementation

MnDOT, MNIT, Transit agencies

Research

MnDOT, University of Minnesota

Software and Data Standards

MnDOT, MNIT, Project Vendor,
Dispatch/Routing Providers

Marketing

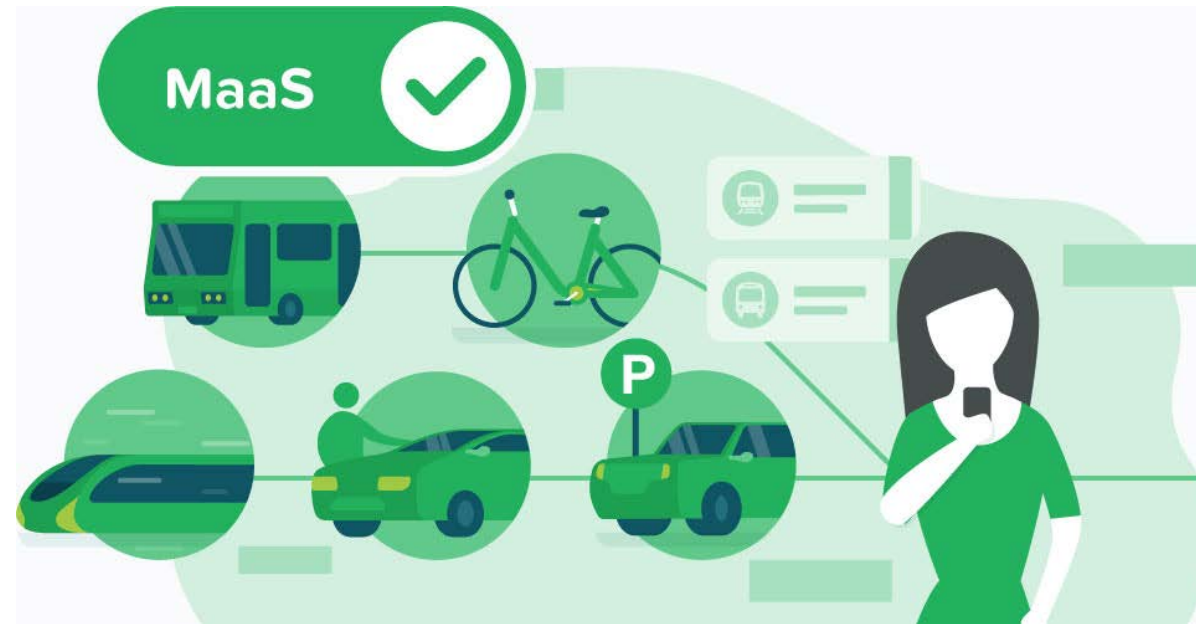
MnDOT Office of Communications

Advisory Group

Select stakeholders

Project Timeline

- Q1 2021
- Cooperative agreements with FTA
 - Begin procurement
 - Research scope finalized



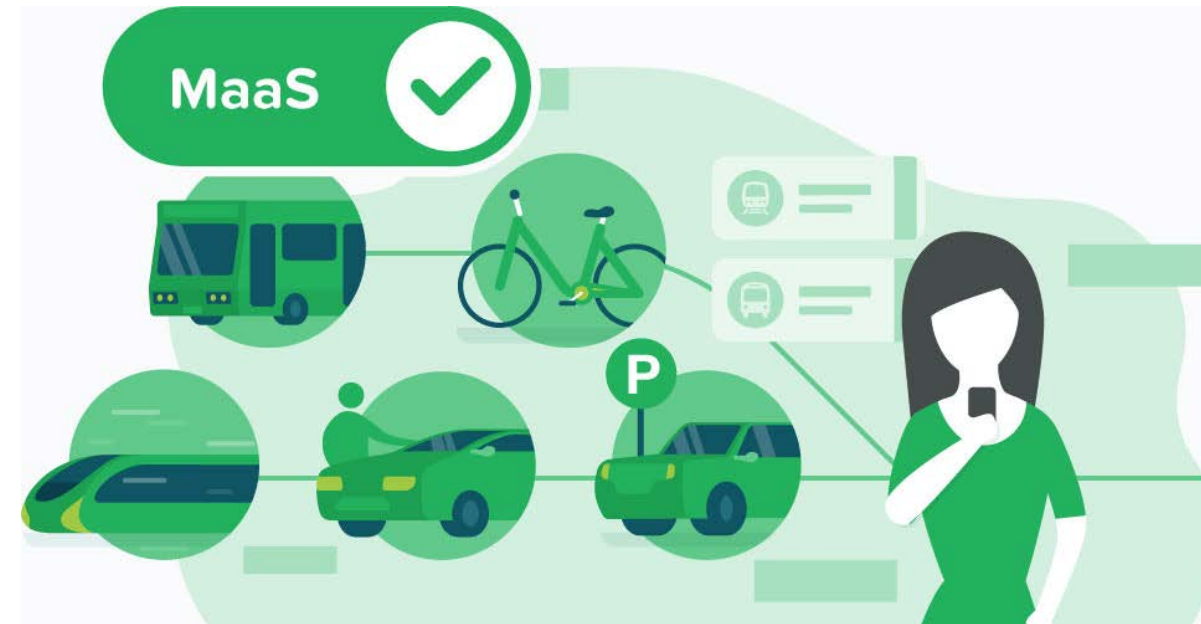
Projects Timeline

- Q2 2021 Stakeholder kickoff meeting
- Finish procurement
- Partnership agreements
- Workgroups begin



Projects Timeline

- Q4 2021 MaaS API toolkits
- MaaS app beta testing
- Q1 2022 Field research begins
- MaaS app launch in Southern Minnesota



Projects Timeline

Q4 2022 Field research wraps up

Q1 2023 End of Southern
Minnesota pilot service

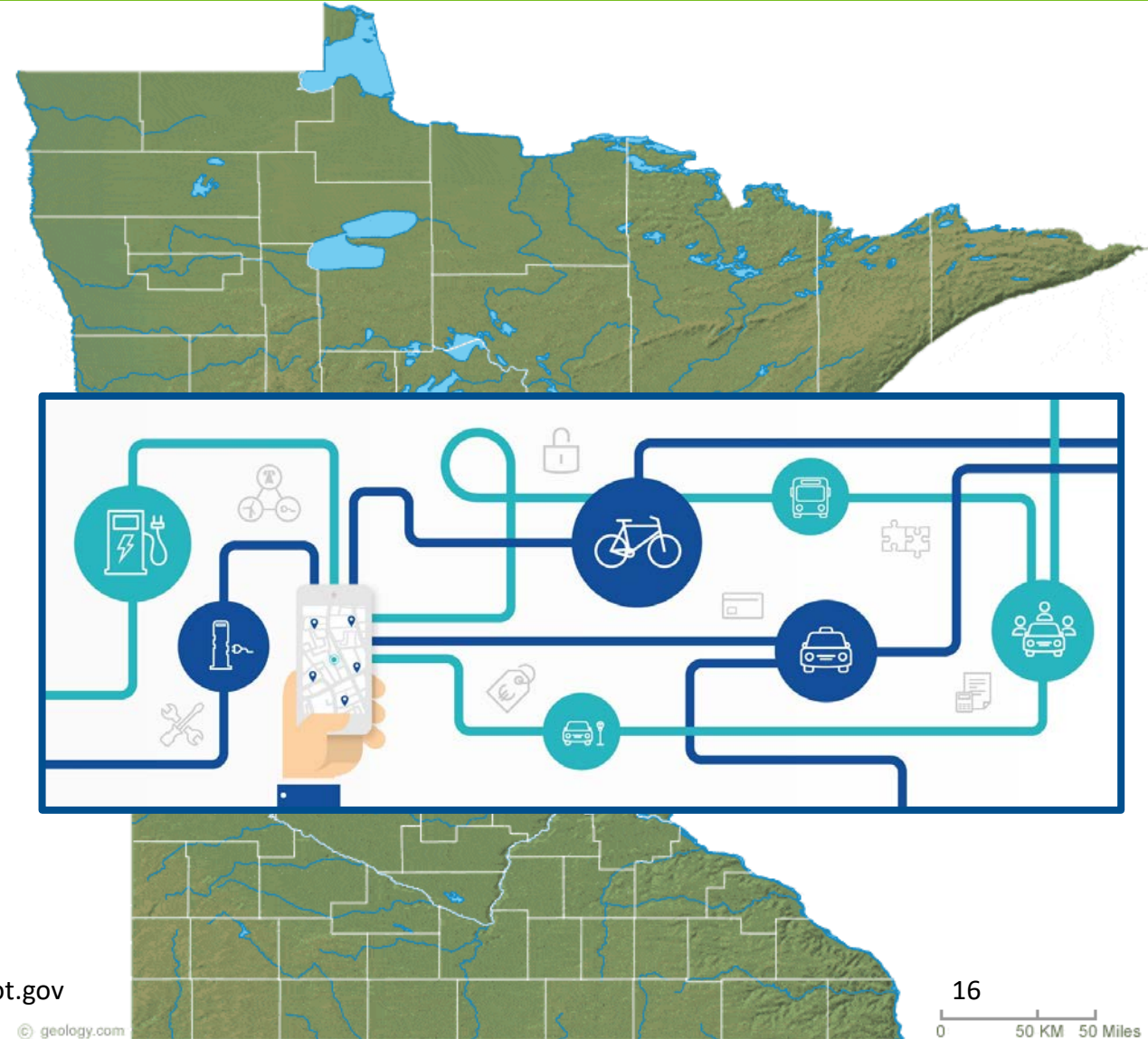


Future Improvements

Next Steps:

2023 and Beyond

- Evaluate for statewide deployment
- Develop standard for billing transactions including non-emergency medical
- Longer term: parking, curb management, distance-based fees



Questions?

