



Promoting Transportation Options and Measuring with a VMT Target

Kristina Heggedal, Future Mobility Planner

MnDOT Office of Sustainability and Public Health

September 15, 2023

MnDOT's VMT Reduction Target

- Work with transportation partners to identify and advance statewide strategies for reducing per capita vehicle miles traveled (VMT) 20% by 2050. (*Statewide Multimodal Transportation Plan Ch 5. Critical Connections*)

	-20% per capita by 2050	
Year	Per Capita⁺	Implied Statewide Total
2025	-4%	-2%
2030	-8%	-3%
2035	-11%	-4%
2040	-14%	-5%
2050	-20%	-7%

- Opportunities to adjust through interim year targets
- Implementation strategies differ by context: urban/suburban/rural

VMT is one measure that can help us understand how the system is serving all users in different communities across the state. It helps inform progress towards agency goals around safety, accessibility, person throughput and reducing emissions causing climate change. – SMTP Ch.5 “Critical Connections”)

Co-benefits

- Decrease risk for motor vehicle crashes
- Increase safety for people walking and biking
- Less time spent in traffic and less money spent on transportation
- Reduce disparities of system that requires personal vehicle to access basic needs
- Reduce long-term financial costs of transportation system expansion

Background on VMT Reduction Target Development

- Initiated by MnDOT's Sustainable Transportation Advisory Council through annual recommendation process
 - VMT and Transportation Options Workgroup
- Impetus was climate and GHG emissions reductions
- Draft VMT Target was proposed in the Statewide Multimodal Transportation Plan
- Ultimately, the target was included in the Critical Connections chapter of the SMTP

20% Target: National and Local Alignment

LOCAL

Hennepin County: -26% by 2050
(per capita from 2017 baseline)

Minneapolis: -21% by 2030

Eden Prairie: -14% by 2050
(per capita from 2017 baseline)

St. Louis Park: -12% by 2030
(per capita from 2014 baseline)

St. Paul: -40% by 2040
(reduction of SOV travel demand)

NATIONAL

California: -15% by 2050
(from 1990 baseline)

Colorado: -10% by 2030

Delaware: -20.4% from 2010

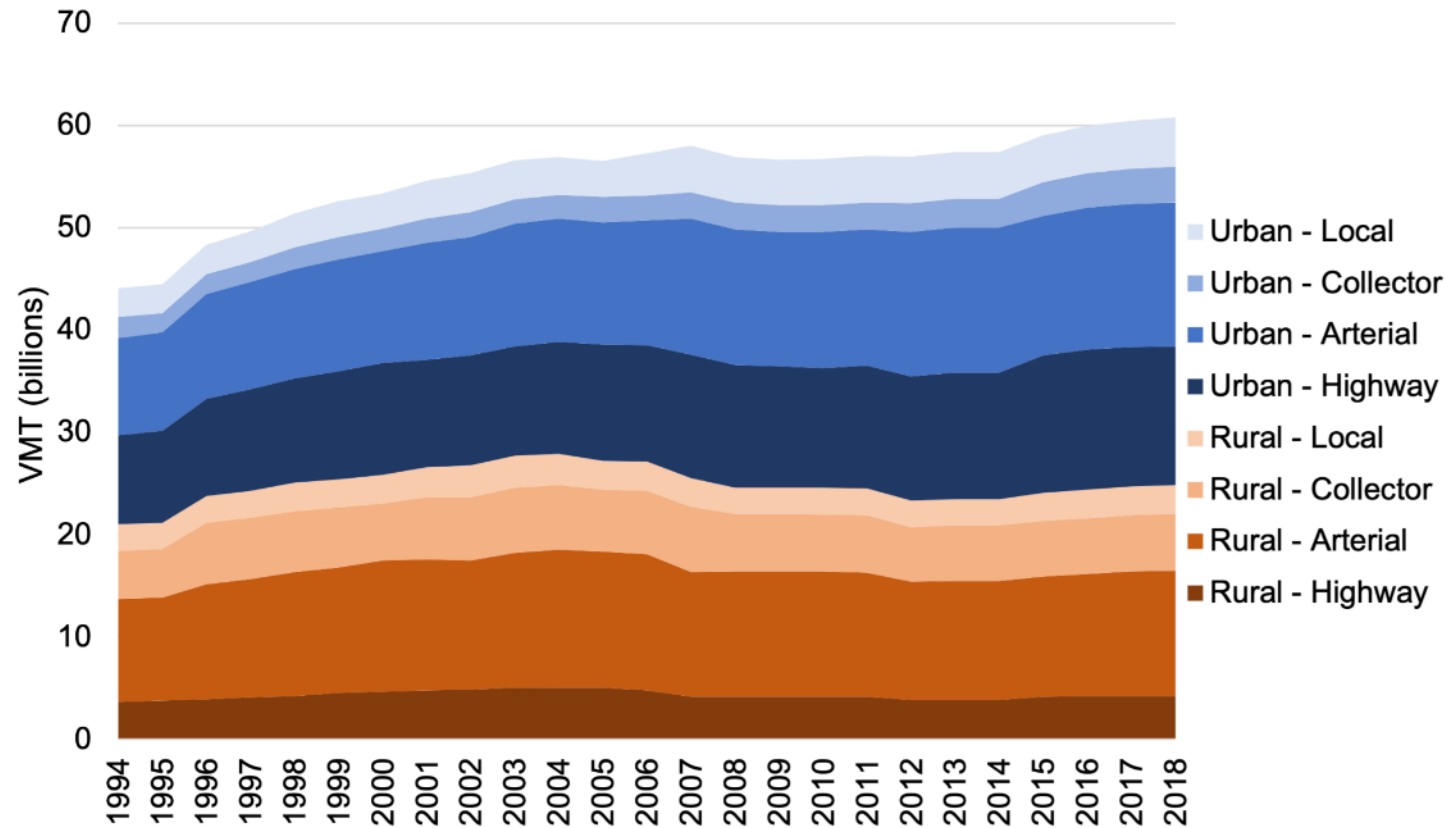
Maine: -20% by 2030
(light-duty VMT)

Washington: -50% by 2050
(light-duty VMT, per capita)

How much does Minnesota drive right now?

Summary of VMT Trends and Drivers

MN trends in VMT by roadway type, 1994 to 2018

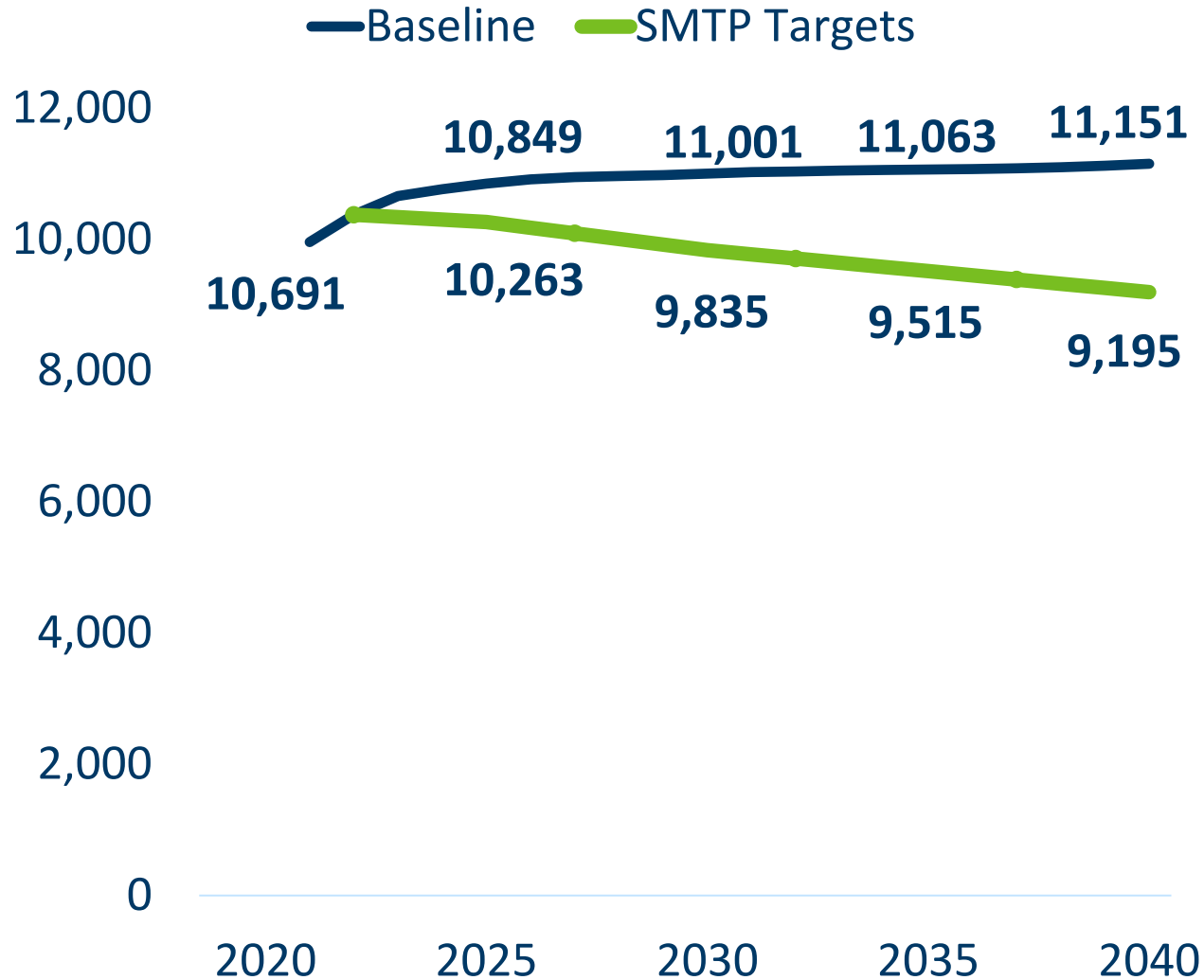


Close to 10% of total VMT in Minnesota is for trips under five miles and about 20% is for trips under 10 miles.

As our VMT increased 40%, our Minnesota population only grew 23%. VMT has increased almost twice as fast as our population.

Since 1994, total VMT in Minnesota has increased 40%, which includes an increase of 59% on urban roadways, and a 20% increase on rural roadways. **Urban highways and arterials account for the largest share of VMT growth.**

Vehicle Miles Traveled Per Capita Reduction Target



VMT Per Capita Reduction Target

From 2019 baseline:

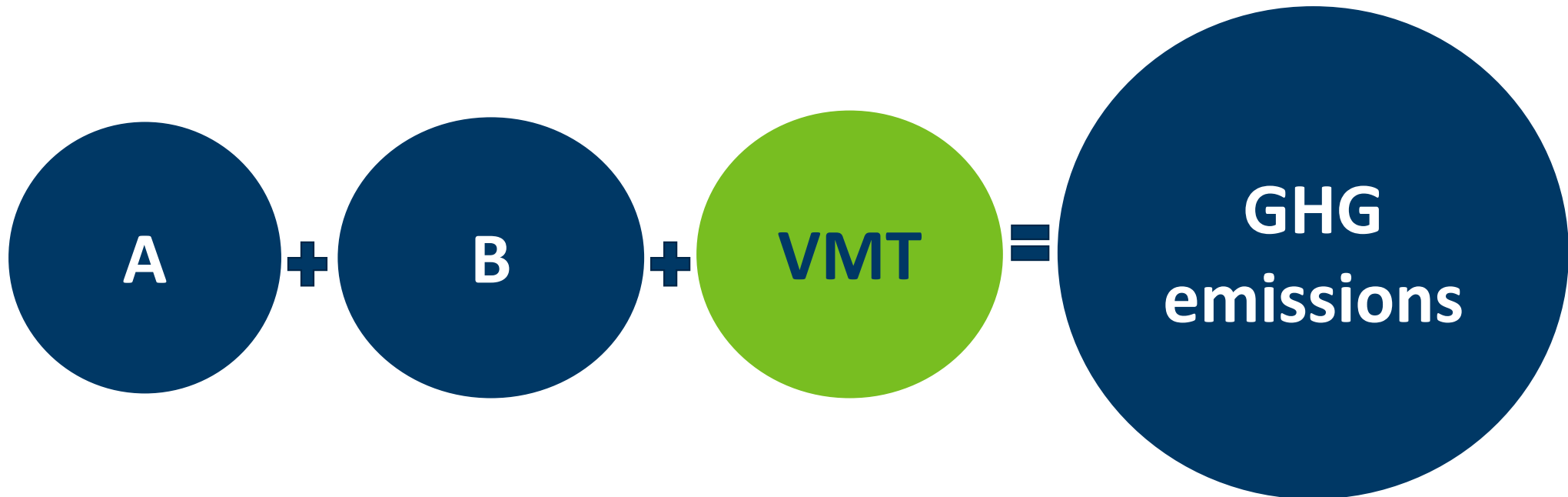
≤ 10,263 by 2025 (-4%)

≤ 9,835 by 2030 (-8%)

≤ 9,515 by 2035 (-11%)

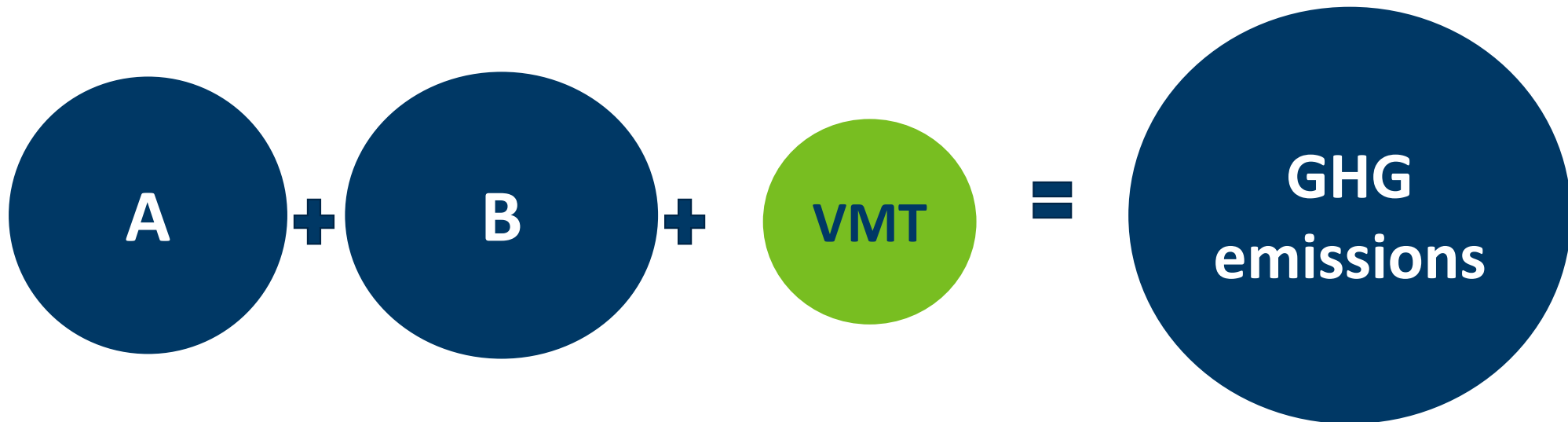
≤ 9,195 by 2040 (-14%)

- VMT is part of the equation
- It should not be assessed in a vacuum - must be paired with other measures to understand how we're impacting access, safety, etc.



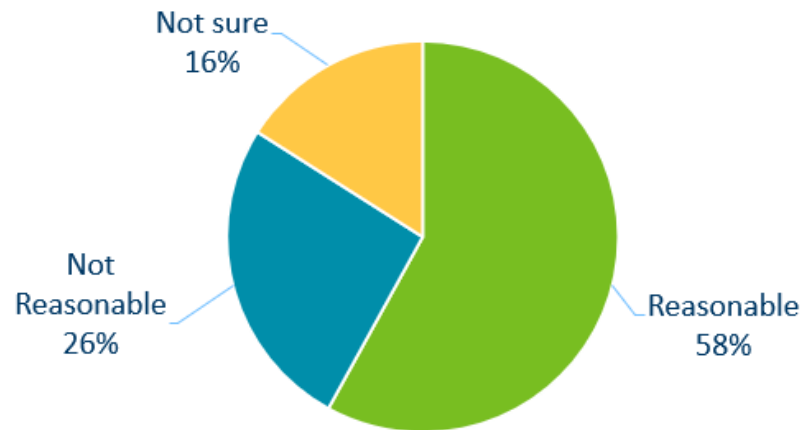
VMT is a Lever

- VMT is part of the equation
- It should not be assessed in a vacuum - must be paired with other measures to understand how we're impacting access, safety, etc.



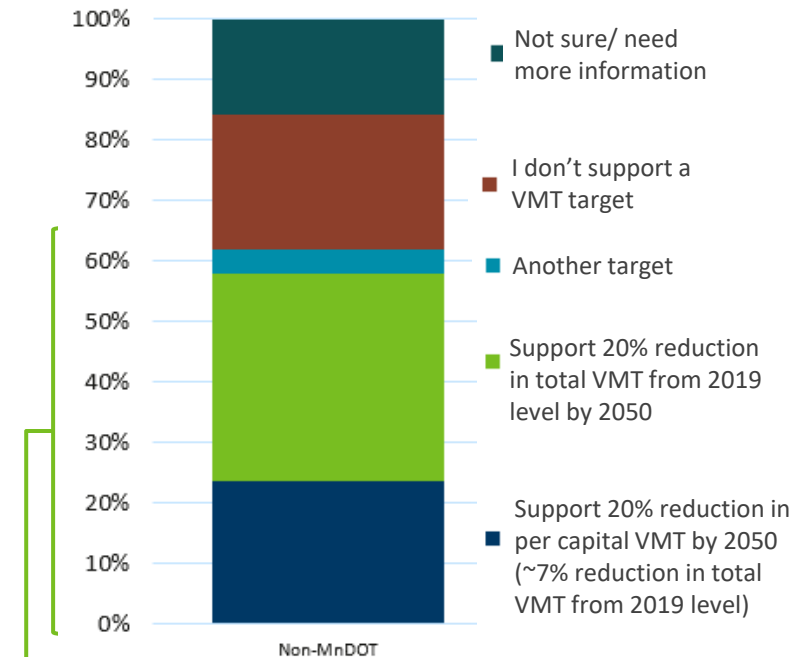
Overall Support for Setting a VMT Target

Reaction to Proposed VMT
Reduction Target: 20% by 2050
SMTP Nov. '21 Online Research (n=665)



Nearly 6 in 10 find a 20% VMT reduction target by 2050 reasonable

Reaction to Proposed VMT Reduction
Target Scenarios
SMTP Dec. '21 Stakeholder Forums (n= 98)

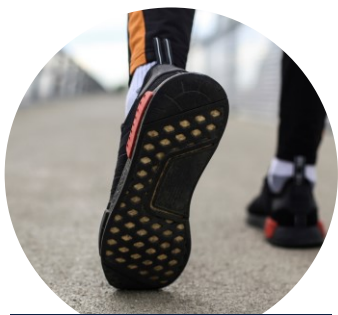


Roughly 60% support some type of VMT reduction target

SMTP Critical Connections Objective

***Critical Connections:** Maintain and improve multimodal transportation connections essential for Minnesotans' prosperity and quality of life. Strategically consider new connections that help meet performance targets and maximize social, economic and environmental benefits*

- Identifying key connections within and between communities is key to providing a complete, efficient and affordable transportation system.
- Ensuring transportation options can support communities by providing the necessary link between people and opportunities.



Walking



Scooters



Bicycle



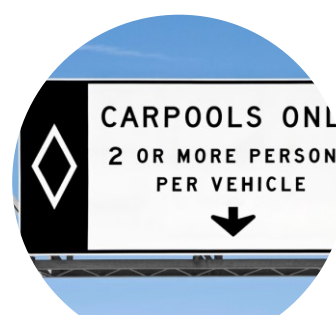
Ride Sharing Service
e.g., Lyft, Uber



Electric Motorbike



Electric Bike



Carpooling



Bus



Telework



Light rail



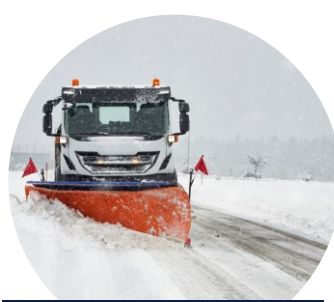
Car Share
e.g., Hour Car



Hybrid or Electric
Vehicle



Freight



City Fleet



Wheelchair



Internal Combustion
Engine (ICE) Vehicle



Transit Mobility

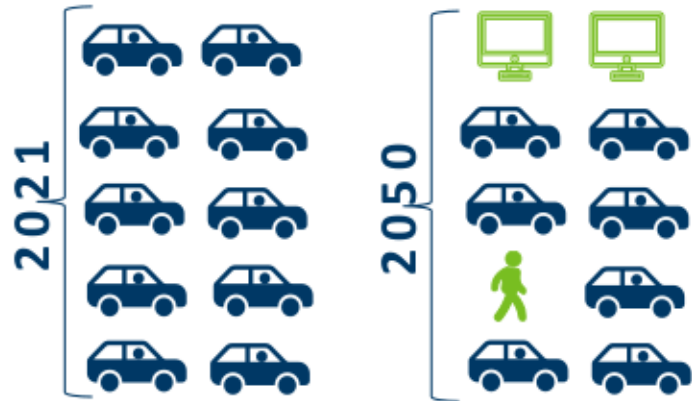
VMT is about travel behavior.

Travel behavior is influenced by transportation options: accessible, affordable, available, comfortable, and safe.

There are many ways to move people and goods around.

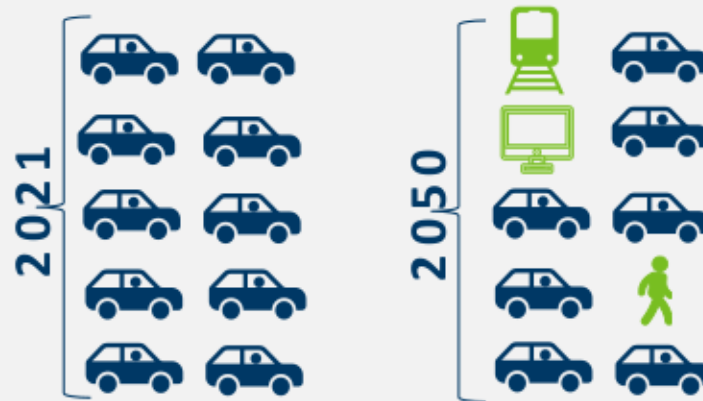
How this can provide day-to-day options

RURAL EXAMPLE



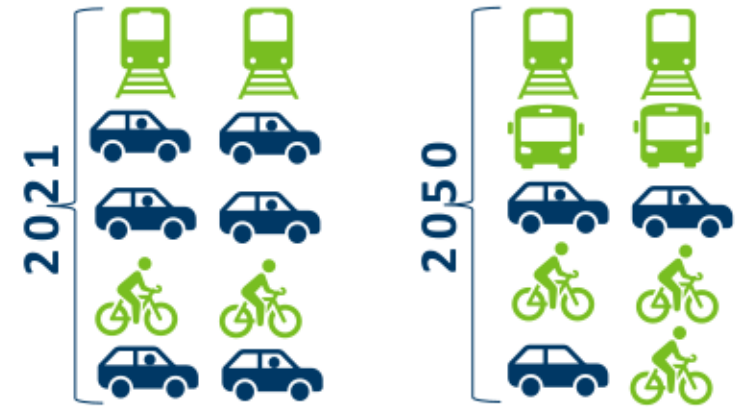
- Tom drives daily for work and school
- Broadband isn't reliable
- Safe walking options are limited
- Broadband improvements allow **teleworking**
- New sidewalks and safer crossings give **access to walk to school** most days

SUBURBAN EXAMPLE



- Jennifer drives daily to work every day and to run errands
- Interested in commuting by transit sometimes and walking for errands, but doesn't see options
- **Improved transit** provides convenient commuting option
- Broadband allows **teleworking**
- **Safer crossings** give access to walk to the grocery store

URBAN EXAMPLE



- Abby owns a car but prefers using public transit or biking to fit in exercise and save money
- Routes between work, home, and school require travel on busy streets, doesn't feel the safest
- New **BRT** provides a reliable home to school route
- New **protected bike lanes** offer a safe, convenient work commute option

Priority Strategies based on VMT trends

Land Use	Influencers
Zoning changes and infill incentives	Local/regional
Growth management programs	Local
Reforming traffic impact assessments - move away from LOS metrics	State
Land use in transportation investments - account for local development patterns and land use policies in project prioritization and programming	State

Highway Spending	Influencers
Planning and modeling for VMT impacts - Evaluate impact of VMT and include in project evaluation criteria	State/regional/ local
Transportation project prioritization - Screening and scoring potential investments for accessibility or VMT impacts	State/regional/ local

Travel Options	Influencers
Transit enhancements - HOV and transit lane buildout - Additional capital and operations support	State/regional/ local
Walking and biking improvements - Bike and pedestrian network buildout - Additional capital support - Complete streets guidance	State/regional/ local

Transportation Demand Management	Influencers
Parking reform and pricing	Local
Commuter benefit programs	State/local
Road pricing - Mileage-based pricing - Dynamic tolling - Congestion/cordon pricing - Transparency in pricing	State
Broadband and remote work	State/local

Prioritizing VMT Strategies – MnDOT's Role

LEAD



For issues related to MnDOT owned/operated highways or MnDOT-led policies and/or programs, MnDOT is the leader. This is the agency's primary and traditional mission.

Examples include building out the state trunk highway bicycle network and addressing congestion issues on the freeway.

PARTNER



Where MnDOT policies, plans, programs, and funding impacts local governments but MnDOT may not be the lead agency, MnDOT is a partner with communities and other agencies.

Examples include partnering to advance statewide broadband access or park-and-ride facilities.

SUPPORT



Where MnDOT does not have decision-making authority or investments to contribute, MnDOT can support. While MnDOT's primary mission and level of influence is focused on transportation infrastructure, the agency can support partners in aligned efforts, like land use planning.

VMT Reduction and Transportation Options

- Strategies to reduce VMT must increase transportation options.
- Focus is on replacing, swapping, or adding options.
- VMT is not about changing all trips.
- Some travelers can change more trips. Some travelers are not able to make changes.

Thank you

Kristina Heggedal

Future Mobility Planner, Office of Sustainability and Public Health

kristina.heggedal@state.mn.us