



Influencing Mode Shift Through Behavioral Change Strategies

Problem Description

The majority of Tennesseans use a Single Occupant Vehicle (SOV) to commute, according to the Bureau of Transportation Statistics. This has led to major congestion in cities across the state. Five major cities in Tennessee (Nashville, Cleveland, Memphis, Chattanooga, and Knoxville), are among the 200 most congested in the US. In its 25-Year Long-Range Plan, TDOT aims to reduce the use of SOV through an effective multimodal transportation system. TDOT has also developed a Travel Demand Management (TDM) plan to achieve this goal. It is unclear if these initiatives are being implemented as planned or if they have led to noteworthy outcomes, and what amendments (if any) are warranted to improve them. There is a considerable gap in feedback between TDM implementers and practitioners in this regard. Additionally, most Tennesseans rely on personal vehicles, but it is unclear if this is out of convenience or a lack of multimodal services.

Research Objectives

The overarching goal of the research is to establish a better feedback mechanism between TDM stakeholders and develop strategies that can nudge commuters from SOVs to their sustainable alternatives. To accomplish this goal, the research team proposes the following objectives:

- Conduct a literature review and identify case studies to acquire a state-of-the-art understanding of TDM practices and policies that have proven effective.
- Identify currently implemented TDM measures/policies, challenges in their implementation and provide recommendations to TDOT using tools developed to obtain feedback.
- Develop a survey tool to understand travel behavior and perceptions across the state.

Potential Implementation and Expected Benefits

After completion of the research, TDOT will possess a detailed description of TDM practices and policies that can be considered for implementation. TDOT and TDM stakeholder will be able to make informed decisions referring to the scale and type of TDM approaches that have been successful at various scales. Recommendations will be provided on currently implemented TDM measures and can be utilized in the future for similar purposes. The commuter survey will provide insights to current travel behavior and can be re-administered in the future to track behavioral changes. The visualization tool will be a one-stop-shop for TDOT when considering TDM programs and their potential impacts on traffic. The tool can be utilized and updated as needed.

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PROJECT SCHEDULE:

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