Research Office
Long Range Planning Division
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Research Project Title: Bicycle and Pedestrian Counting: Best Methodologies Assessment

Purpose of the Project

The purpose of the project is to assess different sets of methodologies and technologies of counting pedestrians and bicycles and recommend ways to integrate them into a statewide count program.

Scope and Significance

The research will provide an inventory and assessment of existing methods and technologies applied in Tennessee, best practices from other states, and compare traditional counting methods (e.g., manual counts) with new data sources and emerging technologies (e.g., smartphone apps, video) that can be used for pedestrian and bicycle planning. The findings can inform the development of a statewide bicycle and pedestrian monitoring program. This research will assess the types of questions that can be answered with different approaches, and the cost effectiveness of such technologies and data. The research will be carried out to address six objectives. *Objective 1: Review national and statewide best practices for bicycle and pedestrian count programs. Objective 2: Inventory count programs in Tennessee. Objective 3: Evaluate existing and emerging methods for count data. Objective 4: Evaluate how proposed technologies, or technologies not typically used for count data can supplement count programs. Objective 5: Recommend data analysis approaches for integrating information from disparate technologies across different geographies. Objective 6: Make recommendations for how TDOT can implement count program into long range planning and data systems*

Expected Outcomes

The findings of the research will generate recommendations for appropriate technologies, methods, and strategies to develop a statewide bicycle and pedestrian monitoring program. If gaps exist in the existing count programs conducted statewide, TDOT can work to supplement those gaps to understand statewide infrastructure investment priorities. Targeted investments have potential to improve economic competitiveness, livability, safety (Everyday Counts), resilience, and sustainability. Better count data can also provide better information related to benefits assessment. Moreover, maintaining a consistent and long term dataset allows for better short- and long-term evaluation of how individual cycling projects and larger investments affect overall utilization of infrastructure and other metrics of multimodal systems.

Time Period

The time period for the project is 18 months

Contact Information

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