Project Title: Real-Time Customer Satisfaction Visualization for Strategic Decision Support

PROJECT NUMBER:
RES (2025-01)

PRINCIPAL INVESTIGATOR:
(Dr. Lee Han)
(University of Tennessee - Knoxville)

TDOT LEAD STAFF:
(Julie Carmean)

PROJECT SCHEDULE:
(September 2024) to (August 2026)

Problem Description

TDOT diligently measures the performance and success of the agency's various programs and projects using tangible and quantifiable data including crash data, traffic counts, travel time reliability, incident response time, vehicle miles traveled, and a host of other mobility, accessibility, and even environmental measures. TDOT also recognizes that opinions and perceptions of travelers, residents, and businesses are an important component of successful transportation projects.

Research Objectives

To address the stated research problem and ultimately aid TDOT's effort towards improving communication and customer service, the following are technical objectives identified for this project.

- **Perform Literature and State-of-the-Practice Search** to stay current and benefit from success stories as well as lessons learned from other agencies and industries with customer satisfaction assessments.
- **Conduct Customer Sentiment Source Inventory and Advanced Analysis** to take advantage of all forms of customer surveys TDOT already collects.
- **Provide Customer Satisfaction Visualization through visualization tools** such as Power BI dashboards with interactive functions and timely updates to assist strategic decision support.
- **Perform Extended Comparative and Longitudinal Analyses** to understand customer satisfaction trends over time, on different topics, in different regions and nearby states.
- **Implement Study Findings through Technology Transfer** to ensure the success of the proposed project.

Potential Implementation and Expected Benefits

The key benefit of this study is improved communication with the public through better understanding of customer satisfaction through both solicited opinions, such as surveys, as well as crowdsourced comments on social media. More specific feedback can then be sought from relevant and underrepresented customers.

Sponsored by Tennessee Department of Transportation Strategic Planning Research Office & Federal Highway Administration