

Research in Progress

Outdoor Information Panels to Convey Real-Time Travel Information for Ridership Recovery

Research Need

The MBTA has launched an Outdoor Information Panels (OIP) program. This will update legacy outdoor advertising locations or add other strategic locations near major roadways through digitization, for which 25% of the playlists will have dedicated "set aside" time for MBTA purposes. Research is needed to optimize the set aside time with real time travel information (RTTI).

Goals/Objectives

The MBTA seeks to determine which RTTI meets the needs of current ridership connecting to transit by vehicle, how RTTI can be used to incentivize off-peak travel and how RTTI may lead to mode-shifting. Further, it is of interest to draw inference on the potential decreases to carbon emissions brought forth through anticipated increases in transit use. In the era of covid-19 and its aftermath, using RTTI for occupancy data will also be crucial for rider trust, and relaying the information in an understandable way to vehicular traffic must be studied.

The objectives of this project are to:

1. Develop guidelines for determining locations and contents of RTTI with high potential for incentivizing off-peak travel, recovering ridership loss due to COVID-19 and mode shift, and building rider trust post COVID-19.
2. Understand transit user and non-user preferences on types of RTTI and the value users and non-users place on the information, before and after the implementation of OIPs.
3. Estimate the potential of OIPs in reducing greenhouse gas emissions.

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Project Information

This project is being conducted as part of the Massachusetts Department of Transportation (MassDOT) Research Program with funding from Federal Highway Administration (FHWA) State Planning and Research (SPR) funds.

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Performing Organization:

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Project Champion:

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Project Start Date:

May 24, 2021

Expected Project Completion Date:

January 21, 2023

Methodology

The overall approach is to conduct a series of focus groups and surveys to understand existing and potential transit users' preferences of OIP location, content and design, differentiated by user type, time of day and geographic location. Two waves of focus groups/surveys are planned according to MBTA's OIP deployment schedule, so that the first wave (with one survey) will be conducted before a major deployment, and the second wave (potentially with a number of surveys at agreed upon intervals) will be conducted after a major deployment. Questions on potential users' intended mode shift will be included in both waves and those on realized mode shift of current users will be included in the second wave. Realized and/or intended mode shift will be incorporated into a greenhouse gas emission model to estimate the potential emissions reduction for the catchment areas of the OIPs.

