

UTC Project Information	
Project Title	Evaluation of Dockless Mobility User Exposure to Traffic-Related Air Pollution
University	Texas A&M Transportation Institute
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Funding Source(s) and Amounts Provided (by each agency or organization)	Center for Advancing Research in Transportation Emissions, Energy, and Health (CARTEEH): \$74,000
Total Project Cost	\$74,000
Agency ID or Contract Number	69A3551747128
Start and End Dates	February 1, 2019 – December 31, 2020
Brief Description of Research Project	<p>The fourth-generation or “Dockless mobility,” has been the biggest disruptive force in the bike-share industry solving the “first-last” mile issue of connecting people to/from transit and other destinations. With their high adoption levels combined with little to no regulation regarding their usage, these users are driving along with motorized vehicles exposing them to major concerns. In addition to safety concerns, exposure to traffic-related air pollution (TRAP) is an important factor because scooter users are vulnerable to harmful air pollution due to their direct exposure to vehicular exhaust and increased breathing rate during riding. This study aims to answer key research questions related to understanding the travel behavior patterns and TRAP exposure of dockless scooter users specific to the City of Austin.</p> <p>The study consists of two phases. First phase is to understand the usage patterns of dockless users in terms of their travel time, peak usage and travel patterns through geospatial analysis of dockless trip data and a survey. Second phase of the study is focused on developing an exposure map to TRAP for the city through a chain of modeling components involving traffic-emissions-meteorology-dispersion. The resulting pollutant concentrations will be combined with real-time commuting patterns for a sample of dockless scooters to estimate their dynamic exposure levels</p>

	based on the travel path taken. The emission exposure maps will highlight the hot-spots and time periods of high exposure levels.
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	In progress
Impacts/Benefits of Implementation (actual, not anticipated)	In progress
Web Links <ul style="list-style-type: none"> • Reports • Project website 	In progress

