Reduce Drive Alone Trips in Downtown Durham

In 2018, Durham was awarded a Bloomberg Mayors Challenge grant to test drive-alone commute reduction strategies. The team used a human-centered approach that focused on equity and transportation access to launch several pilots, including the Bull E-Bike Pilot in 2022.

Unlike traditional Transportation Demand Management (TDM) initiatives that focus on high-income individuals with ready access to a vehicle, the Bull E-Bike program sought out workers from the hospitality sector, which was severely impacted by the COVID-19 pandemic, and used electric assist bikes (e-bikes) as a way to improve transportation access and reduce transportation costs for low-income workers, many of whom did not have reliable access to a car. The program ran from August to November 2022.

How did it work? Downtown hospitality workers were able to use the e-bikes for a minimum of four weeks for both work and personal trips, in exchange for sharing information about their experience and tracking their travel via a smartphone app. Participants received training on the e-bike and accessories, commute tracking app (Open PATH), and a custom fitting for their helmet and bike. You can check out NREL’s OpenPATH public dashboard here: https://durham-openpath.nrel.gov/public/

Who participated? Over 322 individuals applied for the program, and 61 were selected to participate in seven cohorts. Of the participants, 74% reported as non-White/Caucasian, and 29% non-binary, gender non-conforming, or transgender. The median household size was two persons with a household income of $40,000, and 40% of participants reporting working two or more jobs. Check out the QR codes above to view testimonials from some of the Bull E-Bike participants.

What were the results? Participants confirmed more than 1,100 e-bike trips, the majority of which were commuting to and from work. Overall, e-bike trips replaced 2,916 miles of travel, and 1,099 miles of drive-alone vehicle travel was eliminated. The pilot delivered a new mode of transportation for a diverse group of Durham residents. Findings show trends in reducing carbon emissions, increasing mobility, improving health and wellbeing, and providing economic relief.