



THE 2022
**Bull E-Bike
Pilot Program**



Bloomberg Grant

In 2018, Durham was awarded a Bloomberg Mayors Challenge grant (\$1MM) to test drive-alone commute reduction strategies further. Durham specifically won the grant because of its innovative intervention methods to reduce single-occupancy (drive alone) vehicle trips in and around downtown Durham. The team used behavioral science, human-centered design, and rigorous evaluation to launch several pilot programs.

What is an
E-Bike?



E-bike is a broad term that covers a range of battery-powered bicycles



The battery assists the bicyclist, typically, by either adding a boost “assist”, activated via pedaling or by a throttle



Allows users to travel distances and terrains with less effort (and sweat!) than traditional bicycles

How Did the Pilot Work?

The Bull E-Bike Pilot recruited downtown Durham employees who work in the hospitality industry such as restaurants, breweries, and hotels. Preference was given to non-cis male, non-White/Caucasian, age 45+ and non-English speaking applicants who were also transportation-disadvantaged and lower-income. Of the participants, 74% reported as non-White/Caucasian, 18% non-binary or gender conforming, and 11.5% reported as transgender. The median household size was two persons with a household income of \$40,000, and 40% of participants reported working two or more jobs.

Over 322 individuals applied for the program and 61 were selected to participate in one of seven cohorts where they received training on the e-bike and accessories, commute tracking app (OpenPATH), and a custom fitting for their helmet and bike.

The program ran from August to November, 2022. Participants were able to use the e-bikes for a minimum of four weeks and for both work and personal trips. At the end of their cohort, participants completed an exit survey and one-on-one exit interview to share their experiences and travel behavior change while in the program.

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Hay personas como yo, por ejemplo, que nunca habíamos tenido bicicleta para manejar. Nunca habíamos arriesgado. Aprendimos que hay otra manera transportarte. Es económico, no contamina, es rápido. A mí me motivó. Ya me dieron ganas de conseguir la mía para andar en la calle.

**There are people like me, for example, who have never had a bicycle to ride. We had never risked it. We learned that there is another way to get around. It is economical, it doesn't pollute, it is fast, and it motivated me to bike more. I already want to get my own [e-bike] to travel around on the street.*

Yuridia

**translated from Spanish and edited for clarity*



2,933 miles

Participants traveled

54.6% of trips

Commuting to and from work

38.1% of trips

Drive alone travel
was replaced using an e-bike

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I think we saved between \$150 and \$200 on gas last month, with me riding the bike and my husband driving the more fuel-efficient car because I was not taking it.

Aspen



What Were the Results?

Participants confirmed **more than 1,100 e-bike trips**, more than a third (34.57%) of all confirmed trips during the pilot. The majority of these trips (54.6%) were commuting to and from work. Participants often used their e-bikes for exercise (9.4%) and to commute to school (6.6%). As displayed in the graphic below, the e-bike was the most used form of transportation for our participants during the pilot.

Overall, e-bike trips replaced 2,916 miles of travel. Of this, 1,099 miles of drive alone vehicle travel was eliminated. As illustrated below, the program was a success in replacing single-occupancy vehicle trips!

Participants in the program expressed great appreciation for the opportunity to experience Durham in a different way, a change in their views on single occupancy vehicle travel, and a desire to continue biking in the future. Pedestrians and car owners were most likely to see significant changes in their travel patterns, and participants without regular access to a vehicle were most likely to use the e-bike for the majority of their trips.

This 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 well-being, and providing economic relief. While Durham continues to improve education and safe connectivity opportunities across the city, the Bull E-Bike Program has shown there is an appetite for these improvements and for the adoption of non-vehicular transportation modes.

E-Bikes Replaced the Following Modes of Transportation



