

Bicycle-Pedestrian Advisory Committee

Newburgh-Beacon Bike Share System

July.31.2025



THE
FULLERTON

BAHIJ CHANCEY
WXY STUDIO

THE
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NEW YORK
STATE OF
EMPLOYMENT
NYSERDA

WXY

Contents

1

Introduction

2

Community Engagement Summary

3

System Recommendations

4

Appendix

Introduction

1

Overview

We are working with communities and local partners to design a bike share system, expand transportation options, and *strengthen the link* between Beacon and Newburgh.



Bikes for sale at Hales Hardware and Home Supplies in Newburgh

Introduction

Overview

In Fall 2024, the Fullerton, a non-profit organization based in the Hudson Valley cities of Newburgh and Beacon, was awarded a Clean Mobility Planning grant by the New York State Energy Research Development Authority (NYSERDA) to explore bringing a bike share system to the two cities. In partnership with WXY Studio, the Fullerton conducted an outreach process and mobility planning study to explore the potential of a bike share program in Beacon and Newburgh. The study kicked off in early 2025 and culminates in the publication of this mobility report.

Who is involved?



The Fullerton

A volunteer-led nonprofit in Newburgh working in coordination with community members in Newburgh and Beacon.



WXY Studio

A multi-disciplinary agency for the built environment focused on creating equitable, vibrant, and healthy buildings, neighborhoods,



NYSERDA

Support is provided by the New York State Energy Research and Development Authority

Timeline



Introduction

Background

Both Newburgh and Beacon have seen either steady population or sizeable growth in the past decade, roughly remaining the same in Newburgh and ~11% increase in Beacon. Today, the population of the two cities are around 28,000 and 15,000 respectively. A Newburgh-Beacon Bike Share system has the potential to support residents with local commutes, those without access to a car, and people making the last-mile connection from transit to home or work.

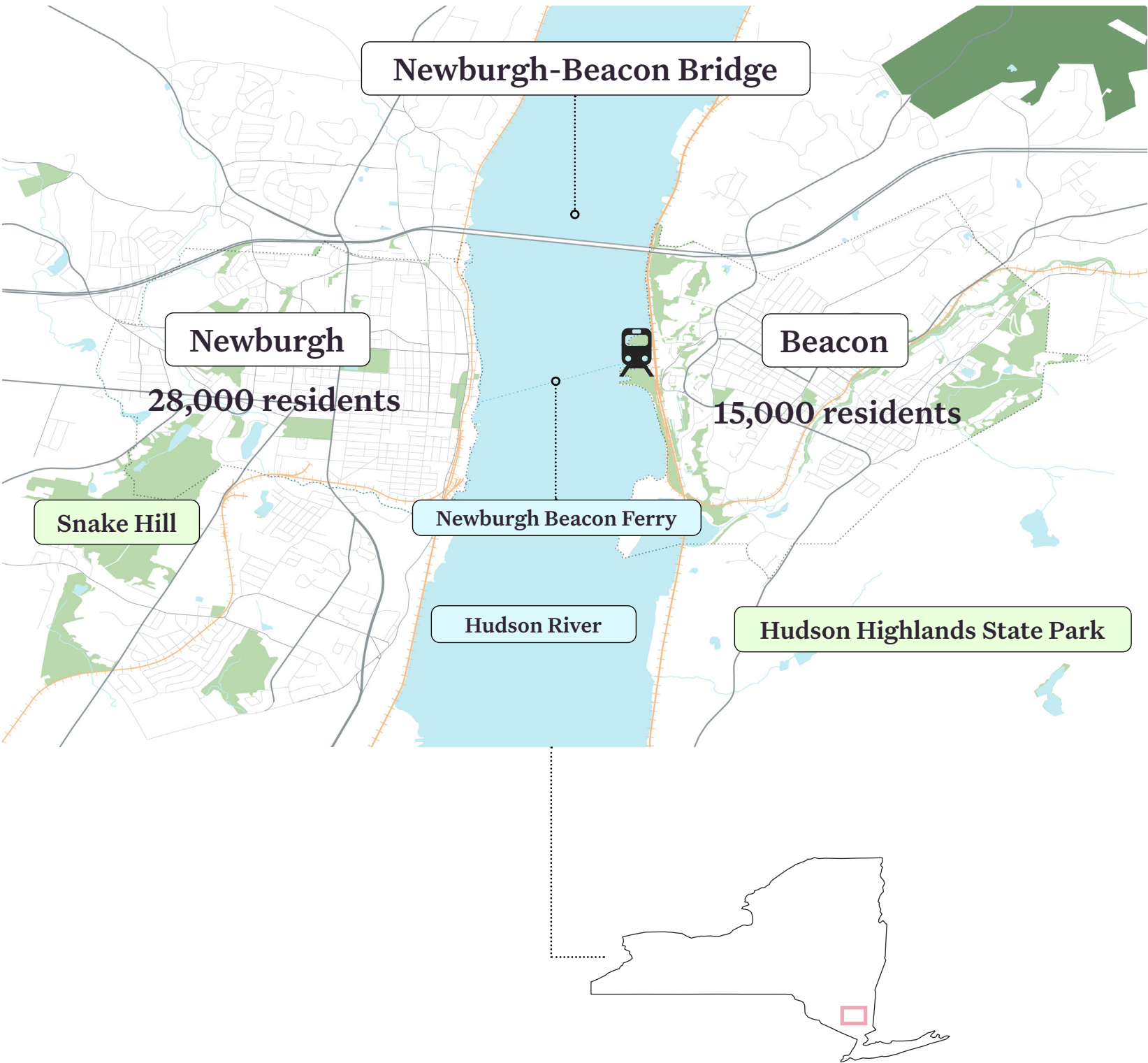
Every day, an average of 41,000 riders travel through the Beacon Metro-North station. In addition to the potential for first and last mile riders, new and rehabilitated development in the densest and most walkable parts of Newburgh, and a planned 300+ unit transit-oriented development slated for the Metro-North station’s north parking lot are likely to bring an influx of new residents who may welcome the option to get around town without a car.

In 2025, The Mid-Hudson Momentum Fund, a state initiative for housing and TOD growth, awarded Orange County \$4.2 million to create a new 53 unit mixed used development in Newburgh¹. As these cities grow new non-vehicular transportation alternatives can help control roadway congestion, increase people’s transportation choices, and support active and low-emission lifestyle choices.



13.78 mil

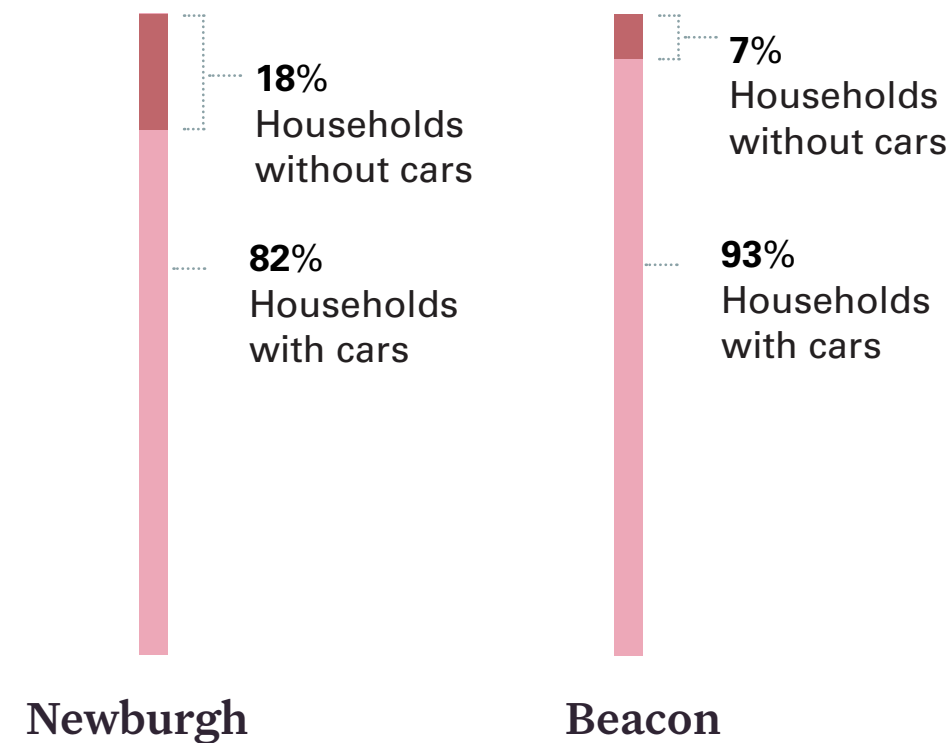
ANNUAL HUDSON LINE METRO NORTH RIDES



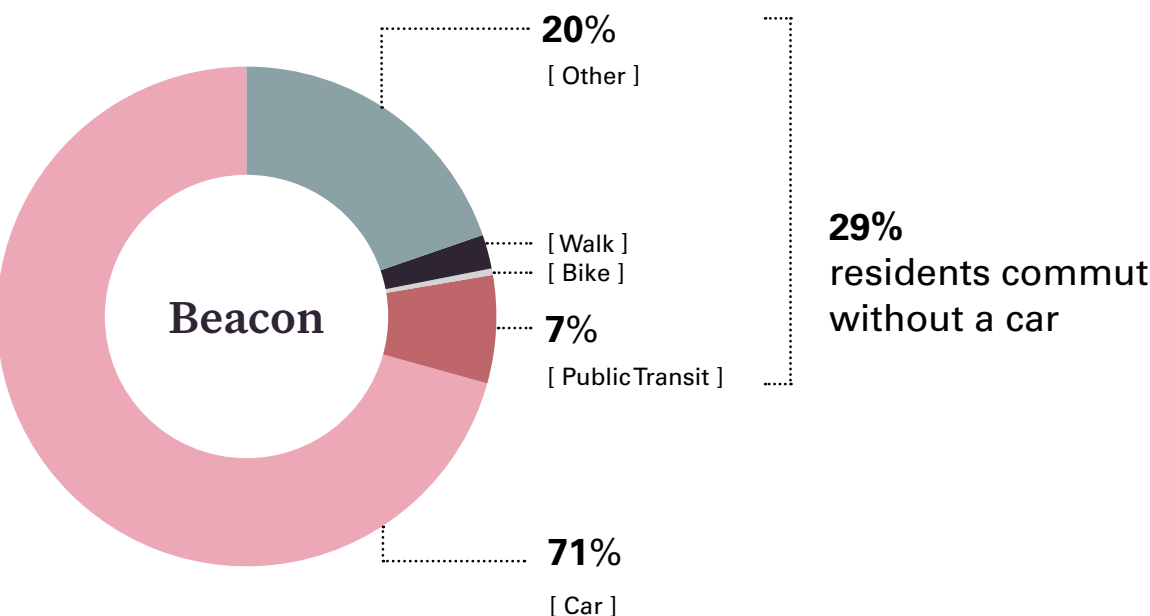
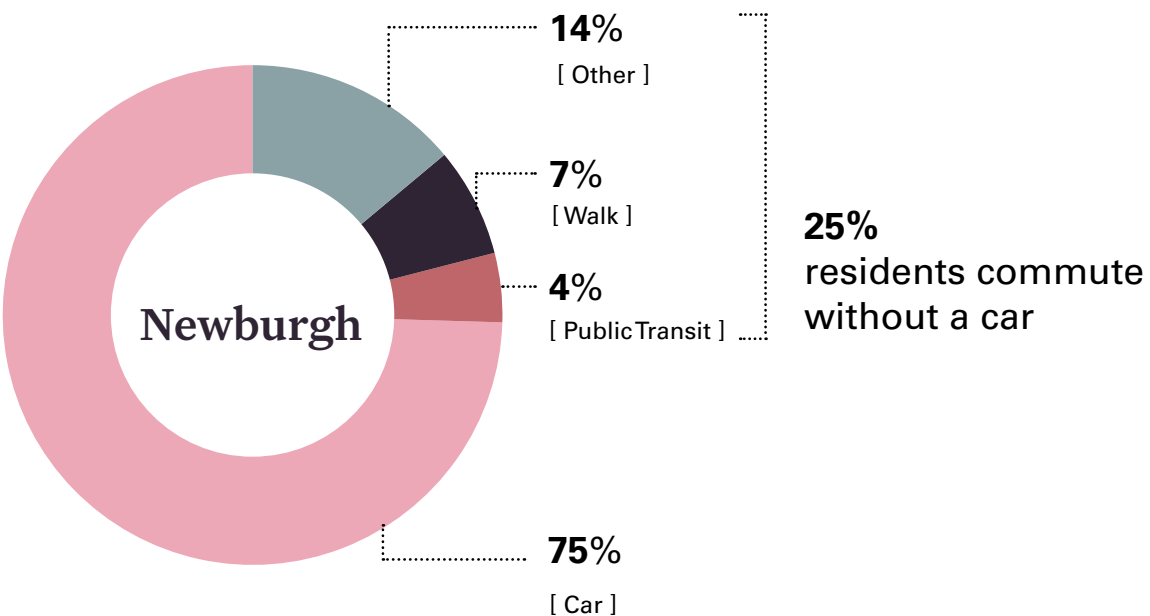
1. <https://www.governor.ny.gov/news/governor-hochul-announces-second-round-mid-hudson-momentum-fund-awards-accelerate-housing>

Transportation Patterns

Household car ownership



Commuter mode share



Introduction

Transportation Patterns

According to the Census Bureau’s Longitudinal Employer-Household Dynamics Origin Destination data, Beacon supports around 5,000 jobs and Newburgh supports around 11,000 jobs. Around 1,200 residents live and work within Newburgh and 700 live and work within Beacon. Approximately, 100 residents make the trip across the bridge to work in the other city. Around 3,000 Newburgh Beacon residents commute to NYC for work and around 1,000 New Yorkers commute into the Newburgh Beacon area to work each day. Approximately 460 people commute from Newburgh and Beacon to areas adjacent to other major Hudson Line stations (excluding NYC and Beacon), and around 225 make the reverse trip. Finally, around 740 workers commute from neighboring states to jobs in Newburgh and Beacon. Given the number of people who commute locally, and the number of people who can commute via transit, a bike share system has the potential to open new multi-mode transportation options for residents and workers.

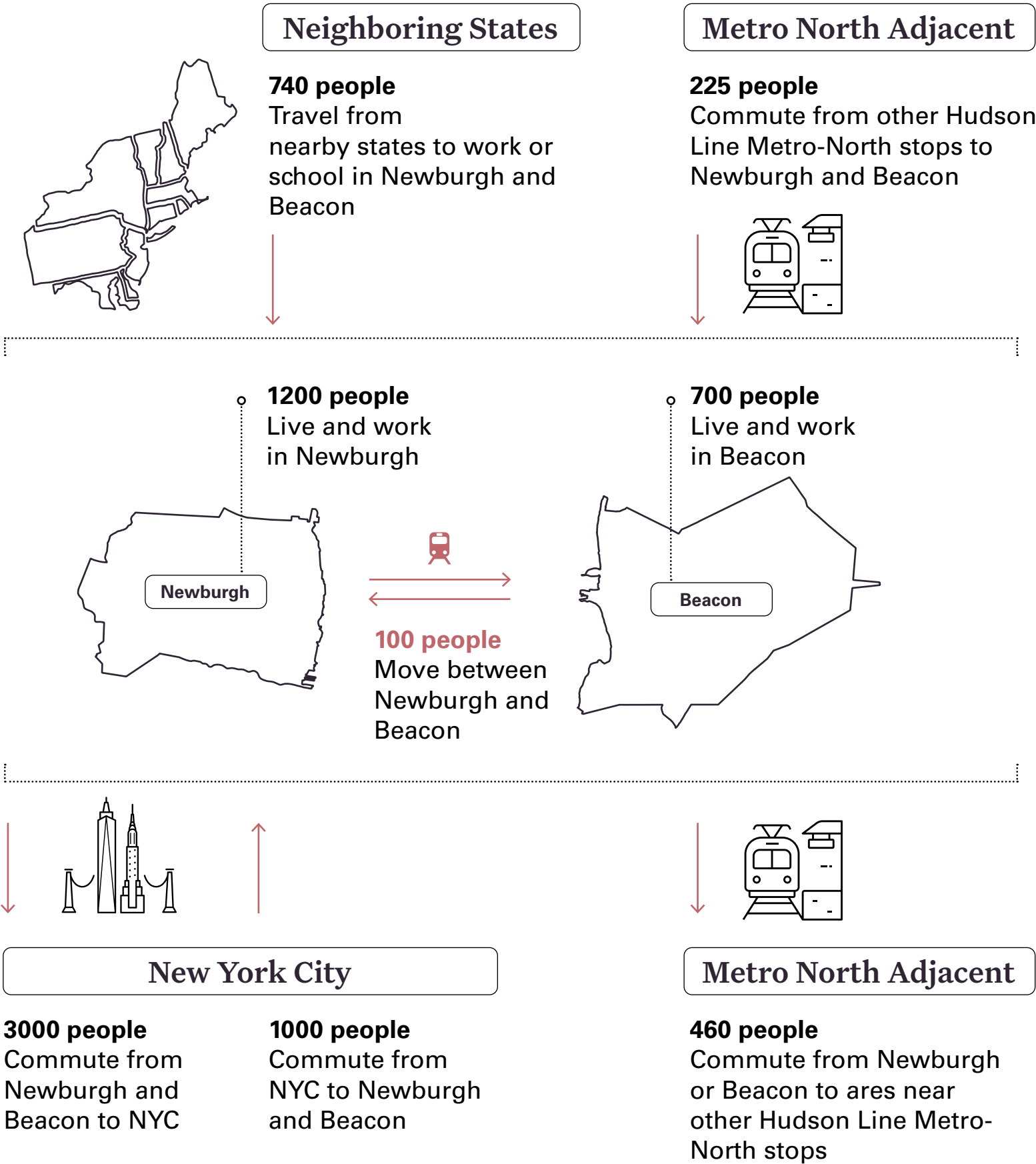
Commuter Stats

11k

Jobs in Newburgh

5k

Jobs in Beacon

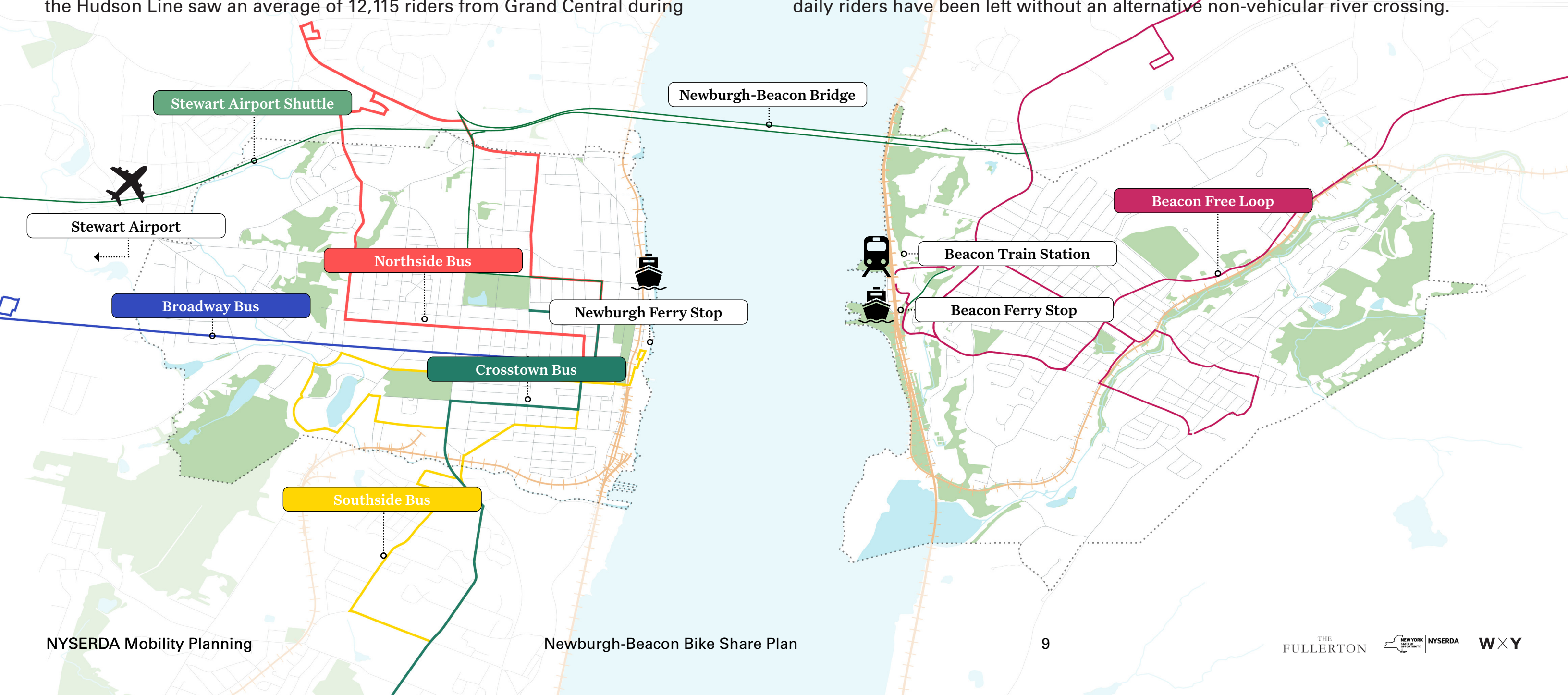


Introduction

Transportation Patterns

A variety of local and regional bus routes operated by both public and private providers already connect people to the train station and various key routes across Beacon and Newburgh. These include the Stewart Airport Shuttle, Beacon Free Loop and local Newburgh routes – the Broadway, Crosstown, Southside, and Northside lines. The Beacon Free Loop is available to riders at no cost, eliminating barrier to ride. In 2024 the annual ridership on the Metro North Hudson Line was 13.78 million, an increase of 13.8% from 2023. In Fall 2024, the Hudson Line saw an average of 12,115 riders from Grand Central during

the AM Peak and 11,170 riders during the PM Peak. According to MTA daily ridership data, approximately 200,000 passengers take the Metro-North each day, 20% of which ride the Hudson Line, providing an estimated 41,000 daily Hudson Line passengers. Introducing a bike share system would improve the accessibility to key nodes across the two cities and offer last-mile connections to several transit hubs in the area. The Newburgh-Beacon Ferry saw 30,000 riders annually. With the ferry’s closure announced in March 2025, and the provision of a substitute bus, those 80 average daily riders have been left without an alternative non-vehicular river crossing.

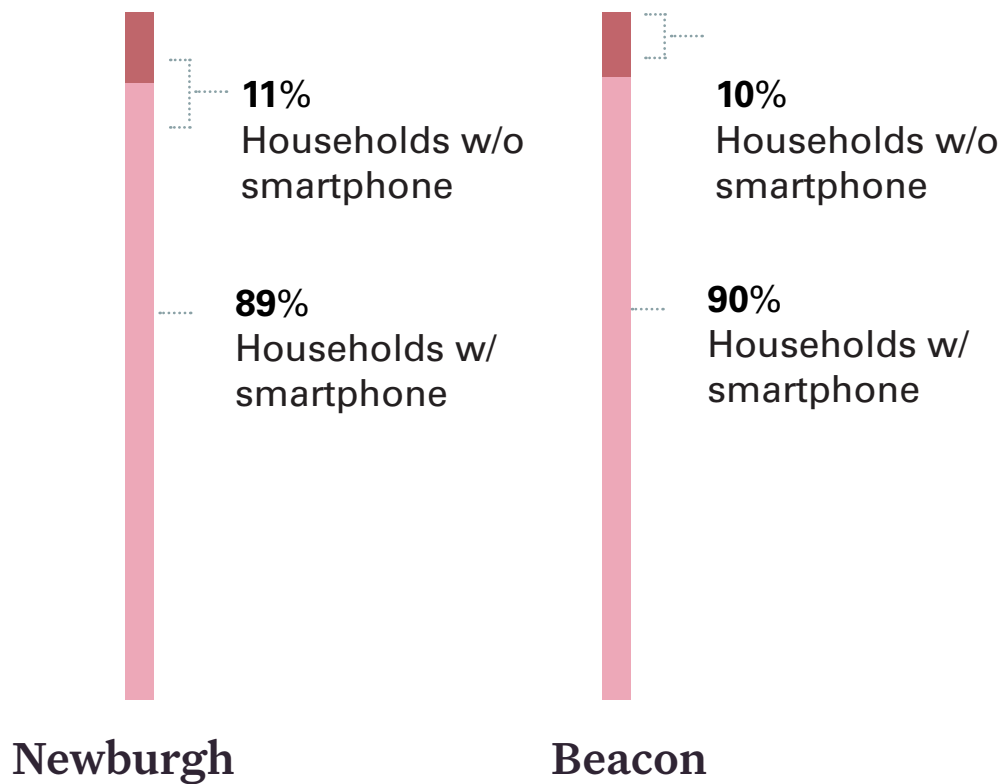


Introduction

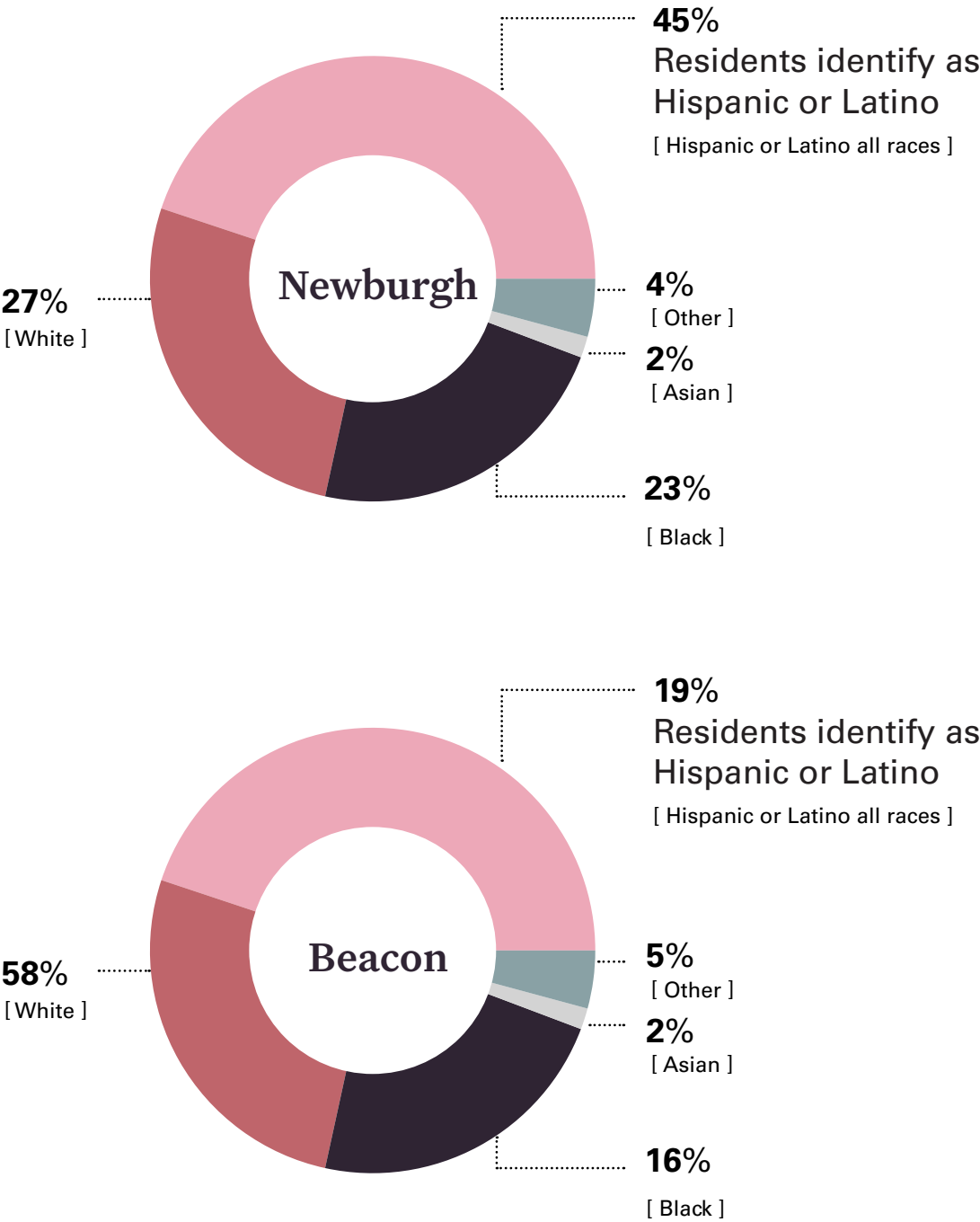
Demographics

The median age in Beacon is 42 years old while the median age skews lower in Newburgh at 32 years. In 2023, the annual income poverty threshold for a four-person household with two children was \$30,900 according to Mid-Hudson Valley Community profiles. Newburgh has a higher percentage of households under \$50k at 49%, while this is lower at 21% in Beacon. Newburgh also has a higher percentage of Hispanic and Latino identifying residents of all races at

Smartphone Access



Racial Demographics



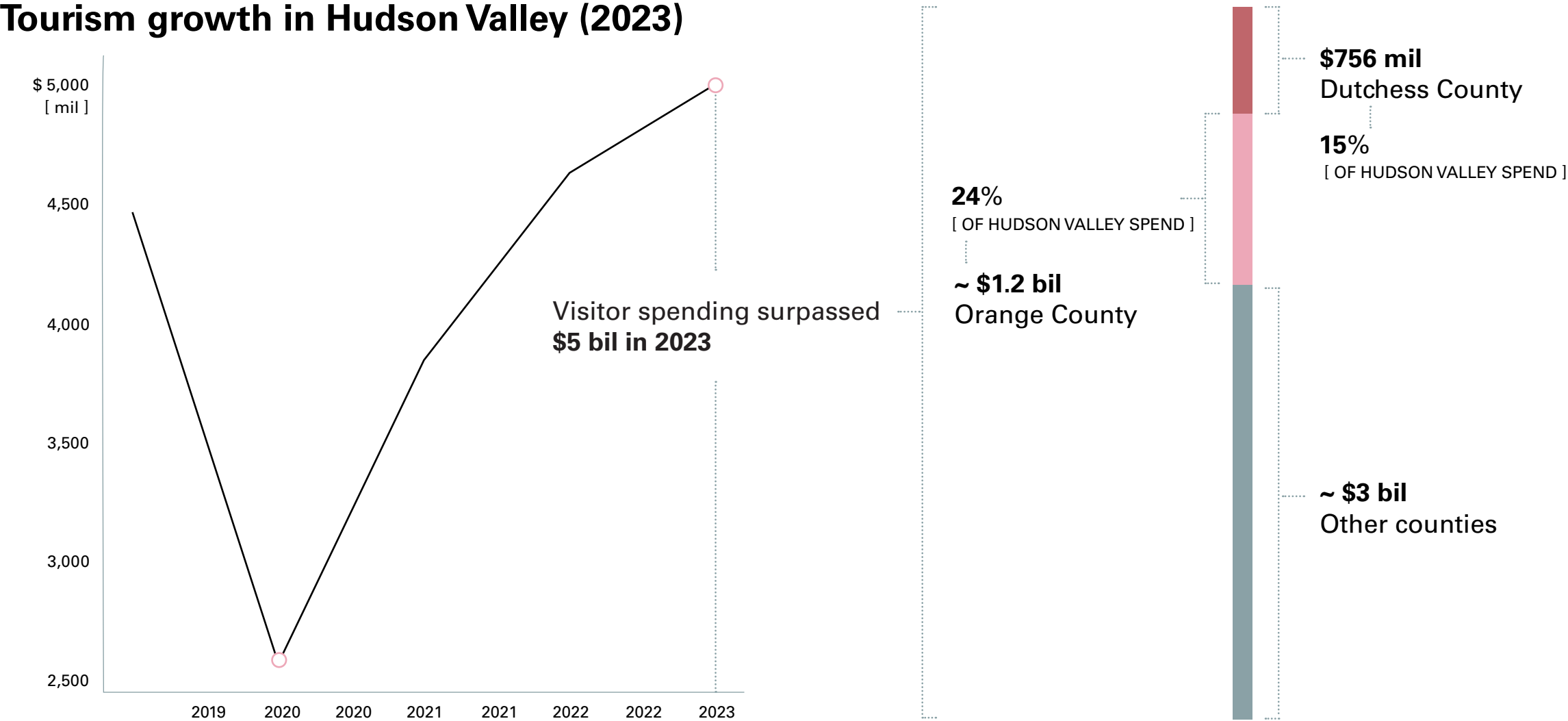
Introduction

Toruism and Recreation

Another lens through which to consider expanding the bike network in Beacon and Newburgh are the arts and cultural institutions that draw increasing visitors to the region such as Dia Beacon, which brings in around \$8 million in tourism per year. Other attractions include Beacon Main Street, Storm King Art Center, Washington’s Headquarters, and Mount Gulian Historic Site. In 2023, visitors

spent a record \$5 billion on tourism in the Hudson Valley alone. Dutchess County and Orange County saw 15% and 24% of that amount respectively. For visitors arriving from NYC on Metro-North, a bike share system offers a convenient and familiar option to cover the last-mile connection from the train station.

Tourism growth in Hudson Valley (2023)



Source: Empire State Development 2023 Tourism Economics Report

Introduction

Why bike share?

Introducing bike share to Newburgh and Beacon has the potential to shift how people get around the region. Walkshed vs cycledshed analysis from the Metro North station in Beacon and the Ferry Stop in Newburgh show that shifting from walking to biking dramatically increases the area reachable within 15 minutes. From end to end, walking across the Newburgh Beacon bridge takes approximately 20 minutes. Taking an e-bike across the bridge could cut that time in half.

Accessible Area from Train and Ferry Stations



Serving a need, filling a desire

Benefits of a bike share system include:

- Transportation alternatives
- More equitable access to recreation
- Cultural connections
- Metro North and bus station activation
- Health and active wellness
- Growth to local businesses and tourism
- Less congested roads from cars
- A low cost transportation option



Transportation
Alternatives



Sister
City Link



Station
Activation



Access to
Recreation



Cultural
Connections



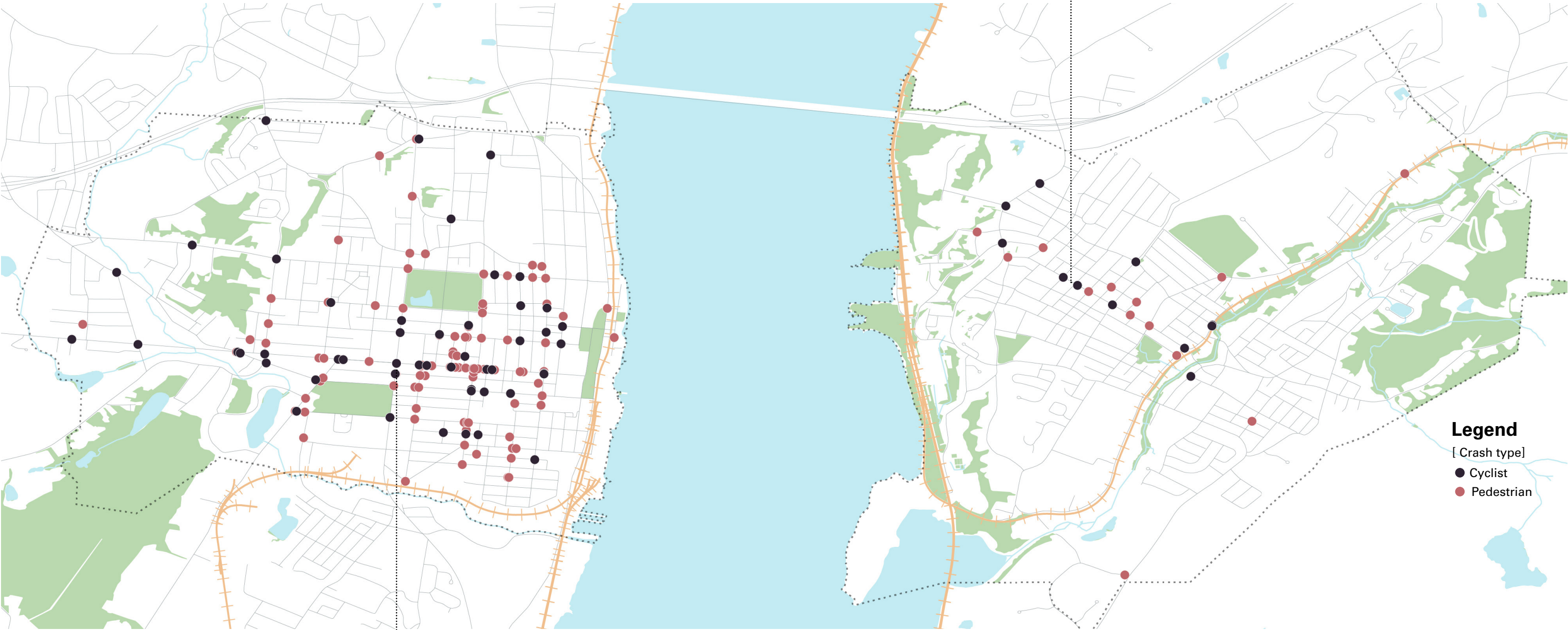
Business
Growth

Introduction

Safety Challenges

With more pedestrians walking around Newburgh
crashes are more dispersed

Most crashes involving injuries in Beacon occur
on Main Street



**Crash Data
2020 to 2025
(Bike/Ped Involved)**

In Newburgh, Broadway is
a hotspot for crashes that
result in injuries

Source: NYSDOT Crash Data, 2025

Introduction

System Stakeholders

Residents + Commuters

Riders

Residents and commuters are the most likely users to use a bike share system daily. Whether they want to bike across the river to visit their sister city, bike to the Beacon Metro-North Station for their commute or a day trip, or wish to bike for leisure, a bike share system can support these needs at all times of the week.

Visitors

Riders

Visitors coming by bus, train, or car will need to buy a day pass or sign-up to gain access to the system, but can then enjoy all its benefits.

Visitor usage of the system will benefit local stores, restaurants and other businesses, while boosting the local economies.

While having a bike share system will aid visitors during their time in Beacon and Newburgh, it may also attract additional visitors to come to the two cities.

Operator

Providers + Partners

The system operator is a private company that offers mobility share system products and services. The operator is responsible for providing bicycles, docks, and other equipment, maintaining the rental interface and processing payments, as well as system maintenance and ongoing operations.

Government

Providers + Partners

Municipal governments in Newburgh and Beacon are responsible for road maintenance and ensuring the safety of all road users, including bike share riders. In some circumstances, system operators hold siting agreements to locate docks on public roadways and sidewalks, and in some cases local governments contribute funding to support mobility programs like this.

Financial Sponsors

Providers + Partners

Bike share systems typically cannot operate on user payments alone and require outside funds. Financial sponsors close the revenue gap to establish a financially sustainable system. Sponsors may include local businesses, business associations, community institutions, as well as government and private grants. Sponsorships may offer advertising rights on bikes and docks.

Station Hosts

Providers + Partners

Station hosts are locations that agree to host a bike share system docking station. Hosts may be either private or public entities. Station hosts hold a siting agreement with the system operator who is responsible for maintaining the station.

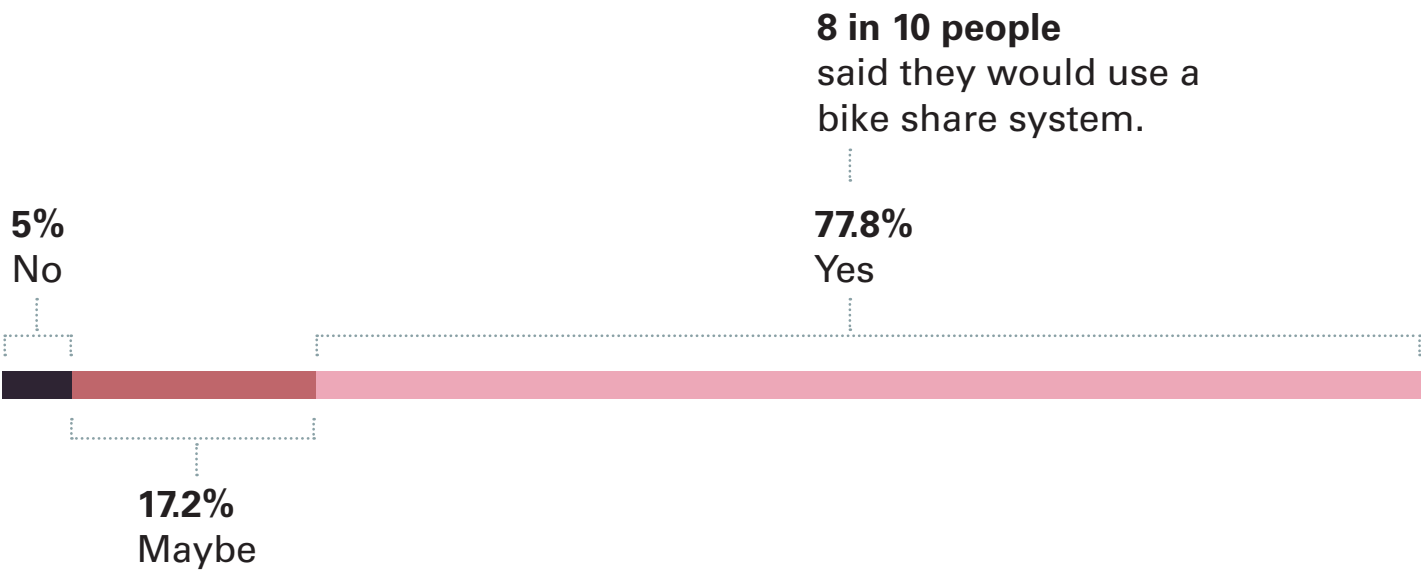
Public Engagement Summary



Public Engagement Summary

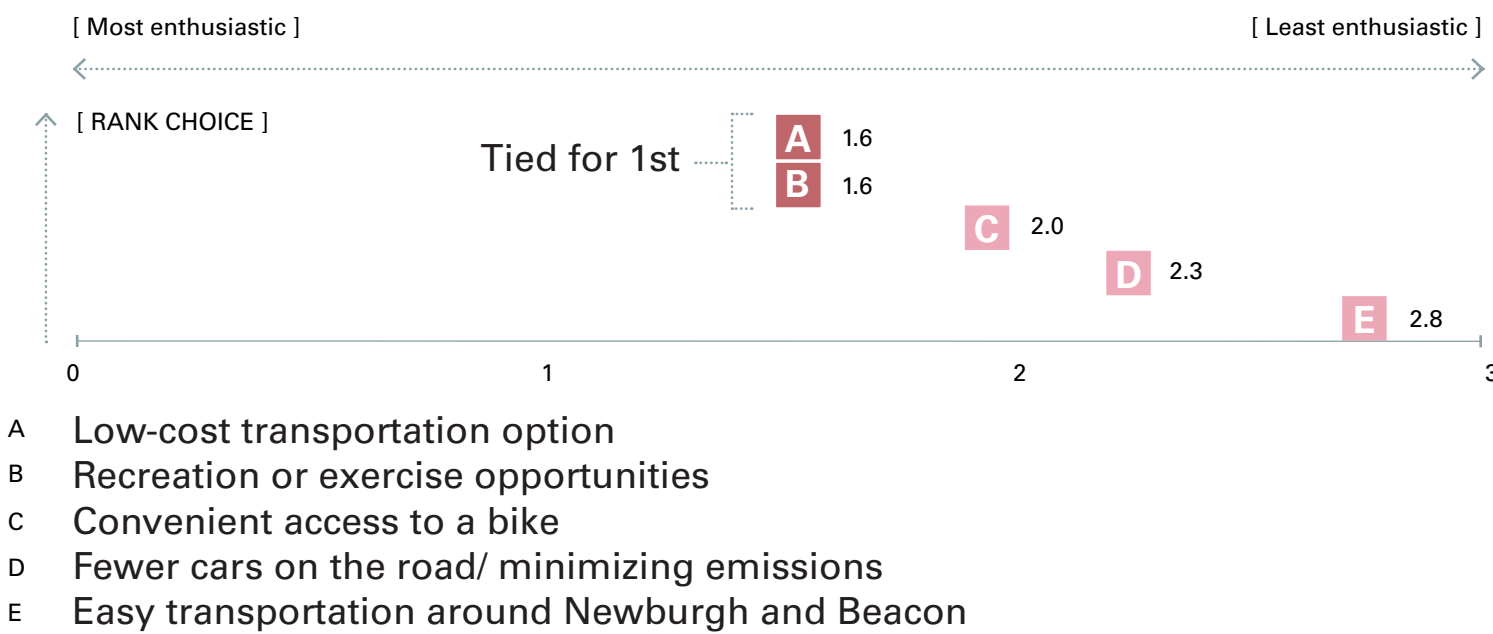
Online Survey Findings

Q1. Would you be interested in using a bike share program if it was available?



“I would [use bike share] as long as it was *conveniently located, reasonably priced,* and I felt safe to do so.”

Q2. What aspect of a bike share program would you be most enthusiastic about?

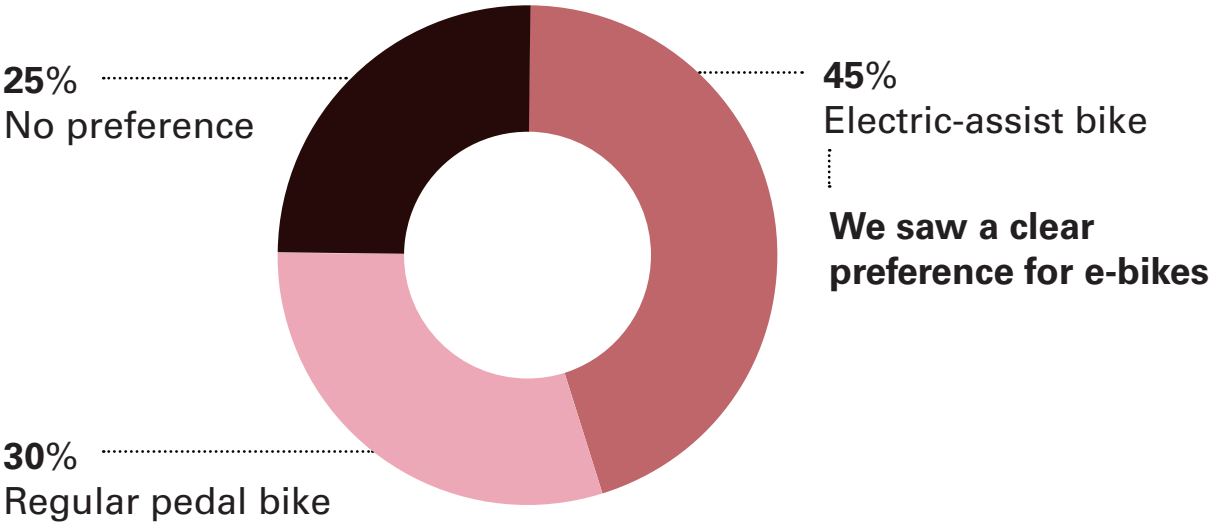


Newburgh is a *“large enough city where you can’t reach everywhere with public transit but integrating bikes within the system can get you the first or last mile.”*

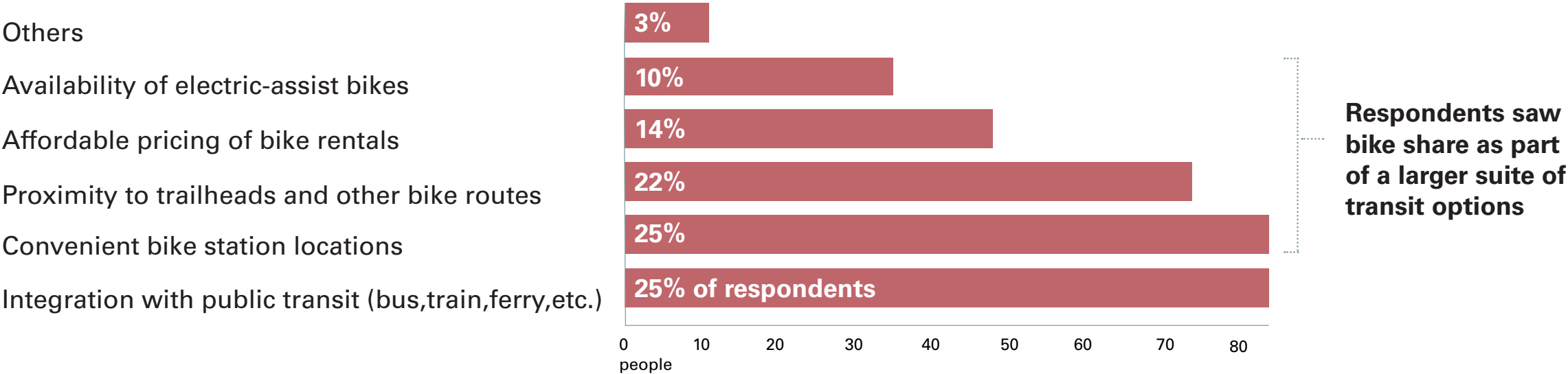
Public Engagement Summary

Online Survey Findings

Q3. What type of bike would you prefer in a bike share system?



Q4. What would be your primary reason for use?

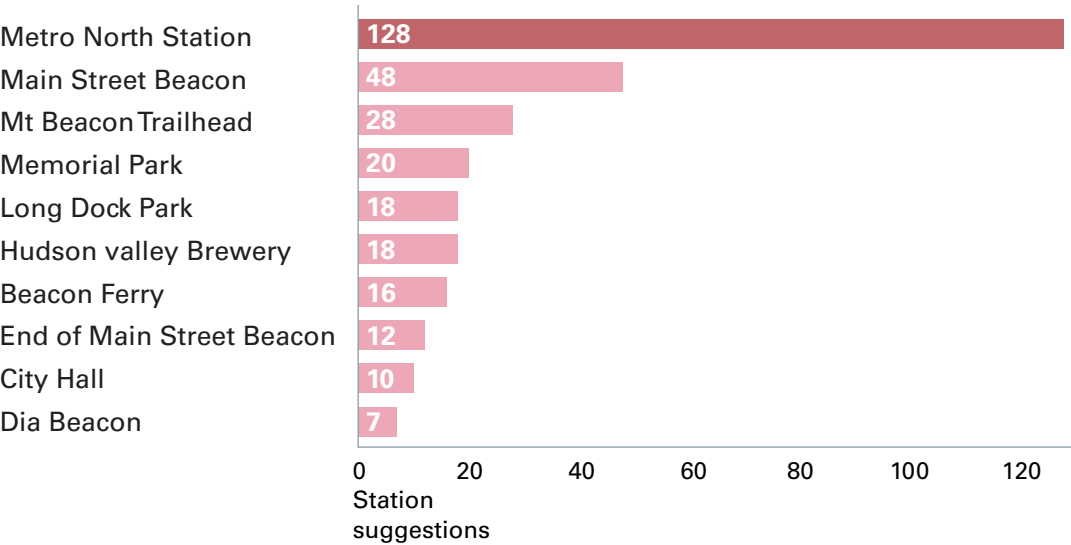


Public Engagement Summary

Online Survey Findings

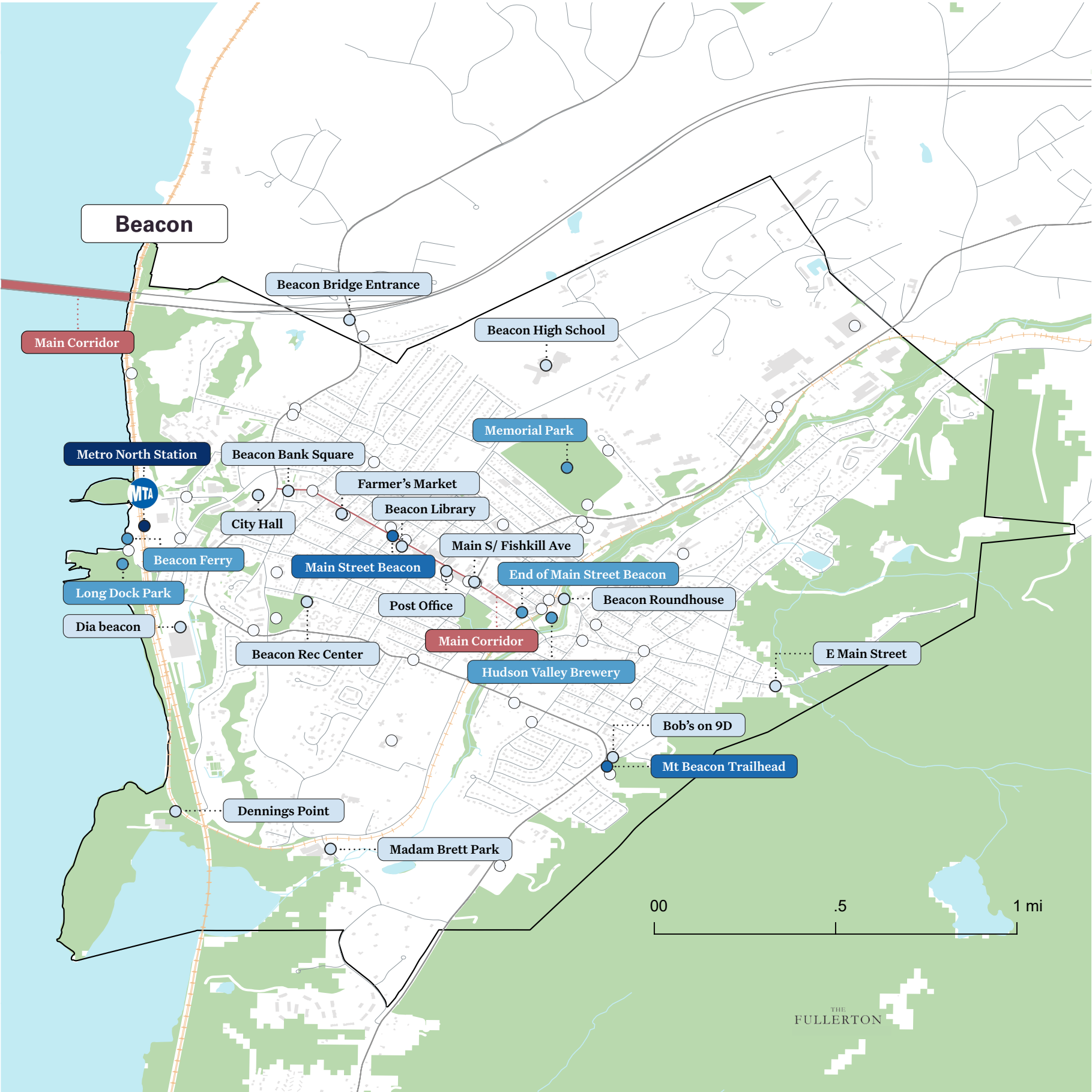
Q6. Where would you like to see a bike share station in Newburgh and/ or Beacon?

Top 10 Beacon Recommendations



Bike Station Mentions

- 1–2
- 2–10
- 10–20
- 20–50
- 50–150

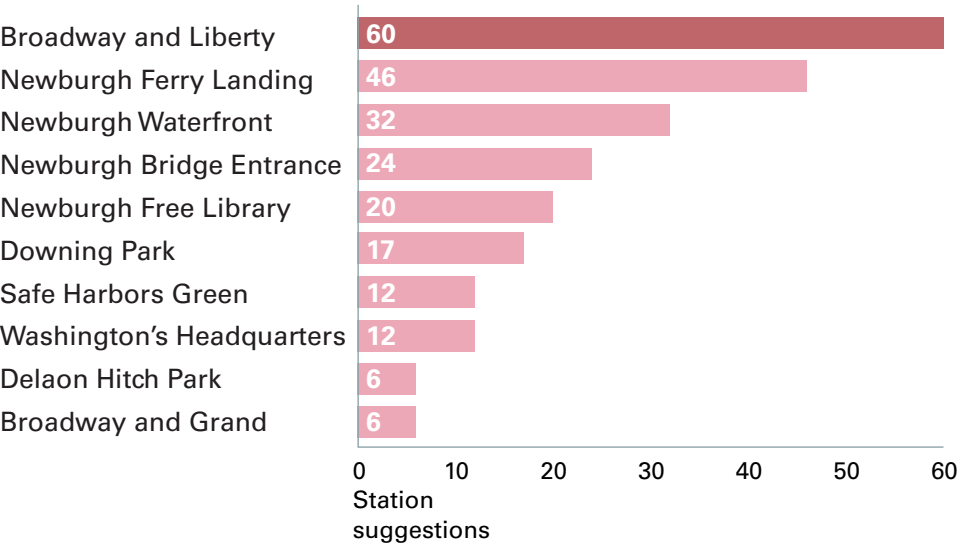


Public Engagement Summary

Online Survey Findings

Q6. Where would you like to see a bike share station in Newburgh and/ or Beacon?

Top 10 Newburgh Recommendations



Bike Station Mentions

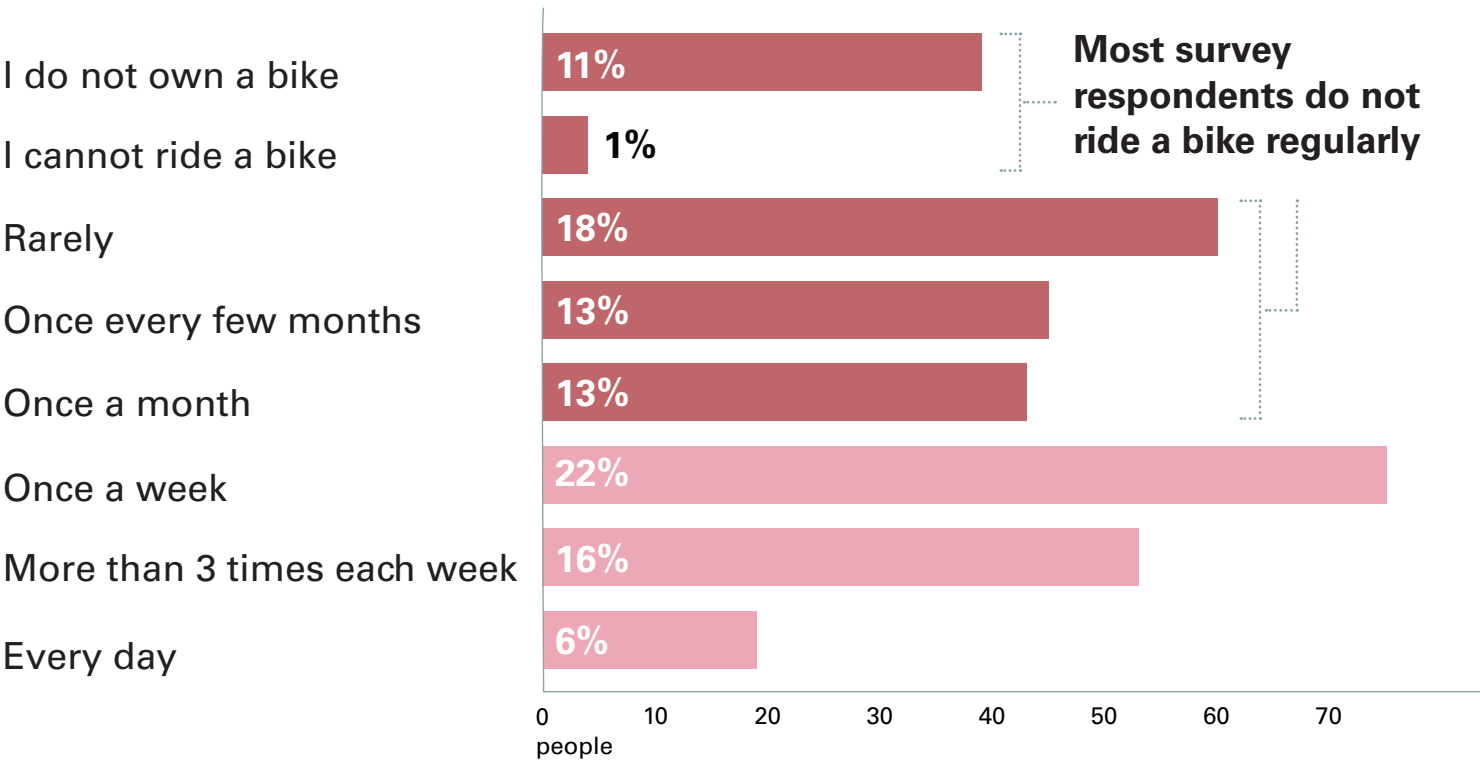
- 1-2
- 2-10
- 10-20
- 20-50
- 50-150



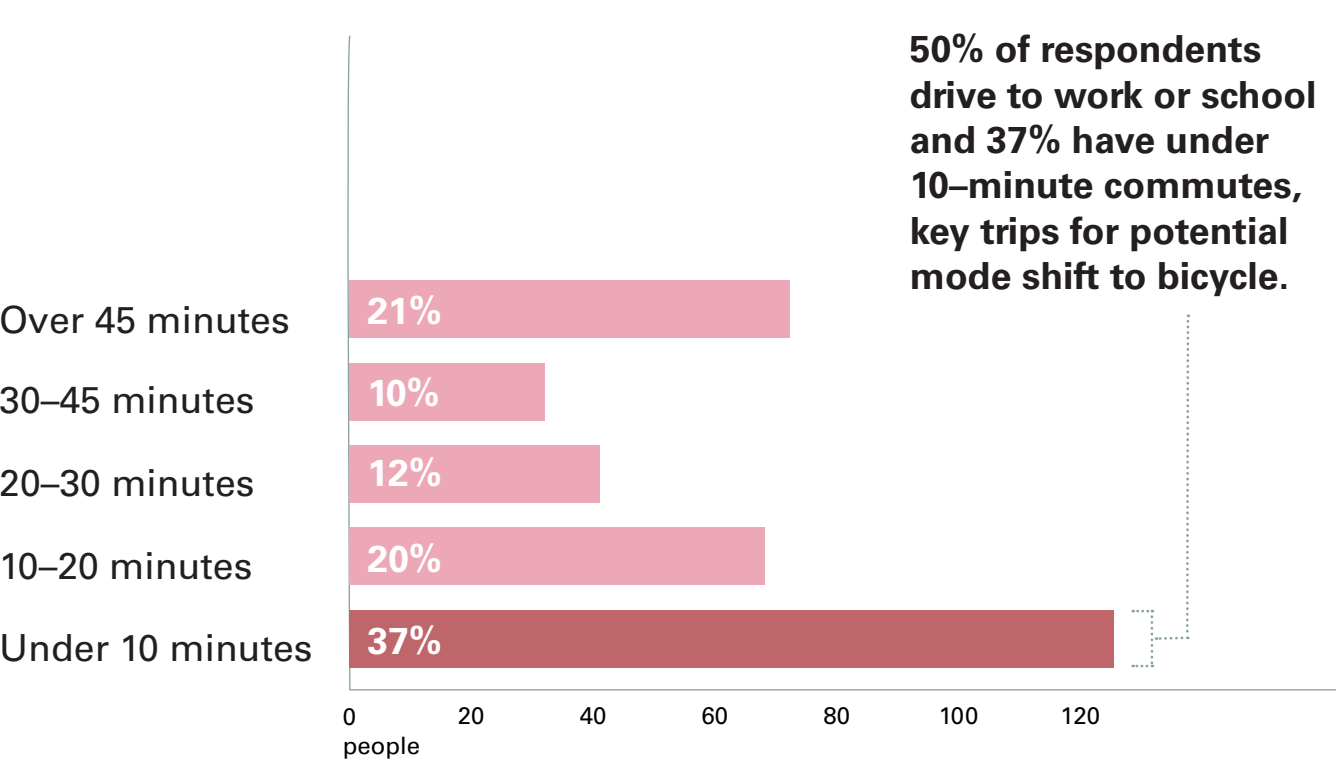
Public Engagement Summary

Online Survey Findings

Q9. How often do you ride a bicycle?



Q11. How long is your commute?



Lastly, the survey sought to understand information about respondents’ bicycling habits, commute, whereabouts, and demographics. The majority of survey respondents (57%) are infrequent cyclists and ride a bike once a month or less. Half of respondents (50%) drive alone to work, Commuter rail and walking were tied with 12% each, and 6% of respondents bike to work or school.

Our survey respondents were about two times more likely to commute by bike than the local average according to US Census data, suggesting a self-selection bias.

When asked about the duration of their commute the sample was split on the high and low ends, 37% of respondents’ commute is under 10 minutes, 20% is between 10 and 20 minutes, and on the high end 21% of respondents’ commutes are over 45 minutes, like commuter rail passengers. Most respondents live in either the City of Newburgh (35%) or Beacon (35%), with the remainder from surrounding towns in the region. Survey participants were more likely to be women (59%) with age groups falling in a roughly normal distribution around middle age.

Public Engagement Summary

Summary of Preliminary Findings

- There is excitement about the potential for a bike share system in Newburgh and Beacon.
- There is a majority preference for a docked system, with access to e-bikes, and pay-per-ride rentals.
- Docking station locations will be important to adoption and usability, with a preference for connections to transit (Metro-North, ferry, buses), shopping districts (Main Street in Beacon, Broadway, and Liberty Street in Newburgh), and trailheads.
- Rider safety, liability and the lack of on-street bicycle infrastructure is the greatest challenge to the system's success and adoption.
- The system can be intentionally designed to serve the people who it may benefit most, specifically lower-income people and households without car access through strategic station locations, language access, and rental interface accommodations.
- The system can be designed to serve residents, commuters, and visitors to the region, but may see poor adoption and use if it prioritizes tourists.

Public and stakeholder engagement is ongoing. Further outreach will prioritize potential station host sites, sponsors, and other key stakeholders, and bolster efforts to engage hard-to-reach communities like lower-income residents, and Spanish speakers.



System Recommendations

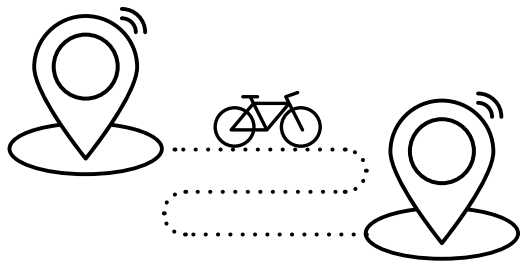
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System Recommendations

Project Goals

Three goals guide the system recommendations that follow, and align the proposed program design with our the team’s initial findings.

Connectivity



- Easily connect commuters on both sides of the Hudson River to the Beacon Metro-North station
- Provide those without access to a car with an alternative form of transportation
- Strengthen the sister-city bond between Newburgh and Beacon

Access + Affordability



- Create a reasonably-priced transportation system, with reduced prices for low-income individuals
- Ensure easy and equitable access to bike locations
- Include various forms of payment options so that those who prefer to pay with cash or do not have access to a smartphone can still use the system

Sustainable Mobility



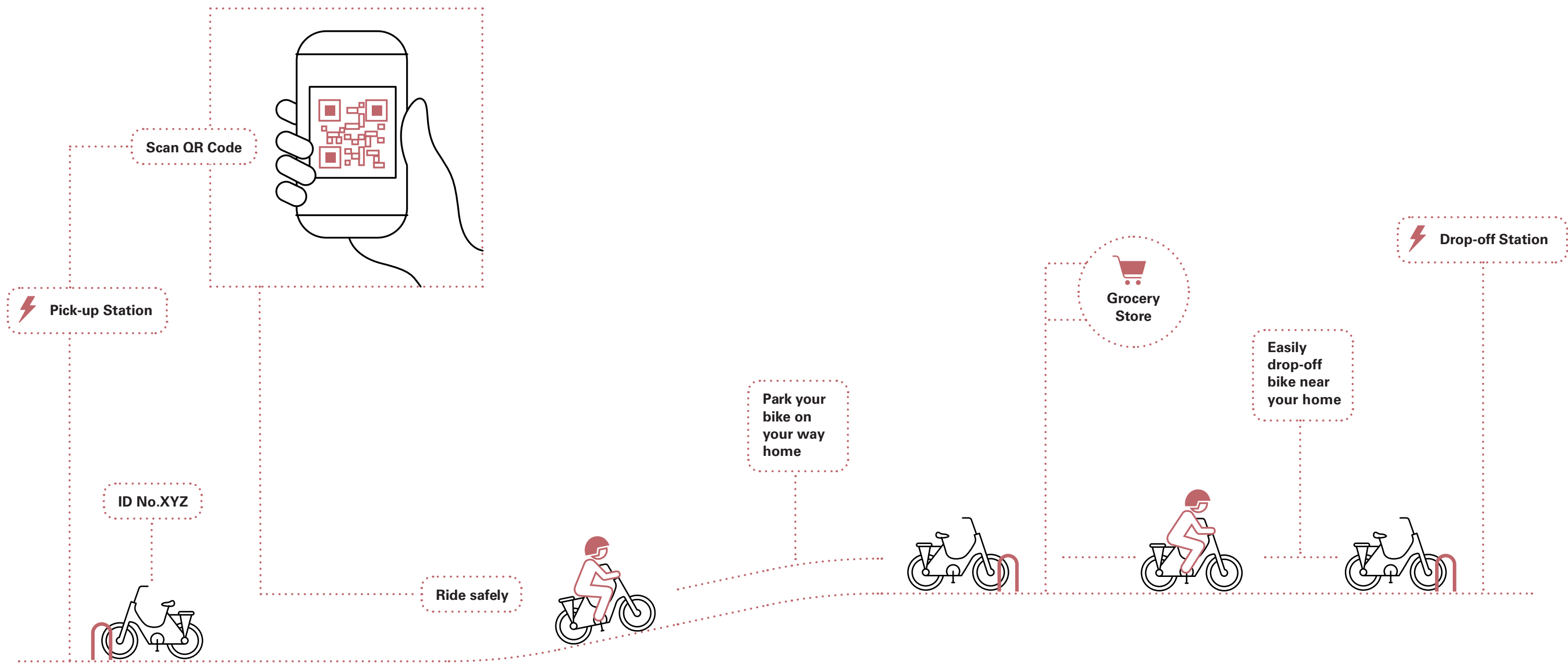
- Reduce emissions from short-distance daily car rides with the introduction of a more environmentally friendly alternative
- Promote a culture of biking and active mobility by getting more people on bikes
- Improve road safety by normalizing bicycling
- Install more bike lanes, create signage, and hold possible education sessions to ease the introduction of a bike share system

System Recommendations

System Overview

A bike share system is a simple and accessible way to get around town by bicycle without hassle. Bike share users avoid worrying about bike maintenance, locking your bike outside, or finding yourself without a bike when you want to ride.

To start your ride, visit the nearest docking station, unlock the bike with your phone or a pre-paid card, and ride and you’re rolling. When you arrive at your destination station, just dock the bike in its designated location and go on your way. Users may choose from regular pedal bicycles or electric assist bikes.



System Recommendations

Equipment: Bikes

In using a shared mobility system, the type of vehicle available to you has an outsized effect on your ride. Most mobility share programs offer some combination of the following vehicles to their users:

- Traditional pedal bicycles;
- Electric assist bicycles (e-bikes);
- Electric scooters, standing or seated.

No Scooters

Through public and key stakeholder engagement we found little appetite to offer scooter options, granted greater familiarity and comfort with bikes, and concerns about safety and improper docking for scooters.

A Preference for E-bikes

Our survey identified a significant 15 percentage point preference for e-bikes in the system over pedal bikes.

The finding reflects both city’s hilly terrains, and the fact that more people already have access to pedal bikes. System operators shared similar findings, noting that e-bikes are typically used 2 to 2.5 times more frequently than pedal bikes in the systems. E-bikes also support greater accessibility for elders or people with lower fitness levels.

Bike Maintenance

Pedal bike maintenance is minimal and low-cost. Aside from pumping the tires and lubricating the chain regularly, parts must be serviced or replaced when broken, which is unlikely to exceed \$150 per year.

Pedal Bikes



PROS

- Lower, safer speeds
- Low operation and maintenance costs
- Minimal barrier to entry

CONS

- Hilly terrain is an obstacle
- Requires higher fitness

E-Bikes



PROS

- 2–2.5x more frequently used
- Accessible for riders of all ages and abilities
- Faster travel

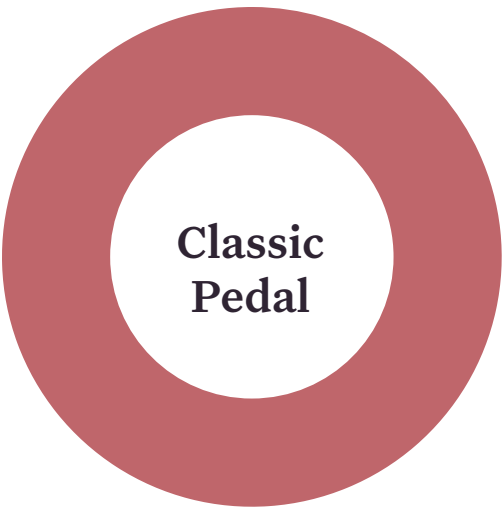
CONS

- Higher operational costs for charging and battery swapping
- Higher up-front costs

System Recommendations

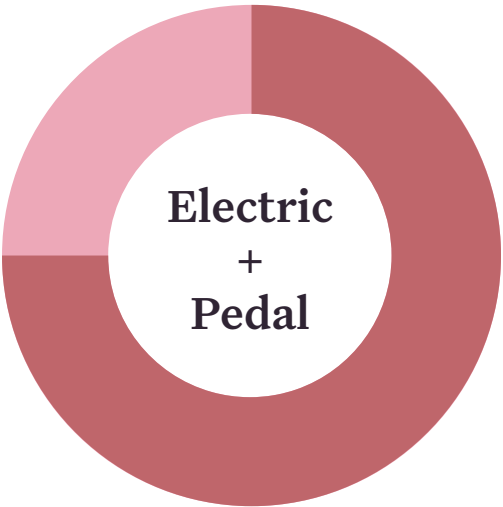
Bike Split Options

100% Classic Pedal



- Minimal operating costs
- Minimizes community-concern about high-speed riding
- Steep hills and long-distance trips may be prohibitive to system use

75% Electric | 25% Pedal

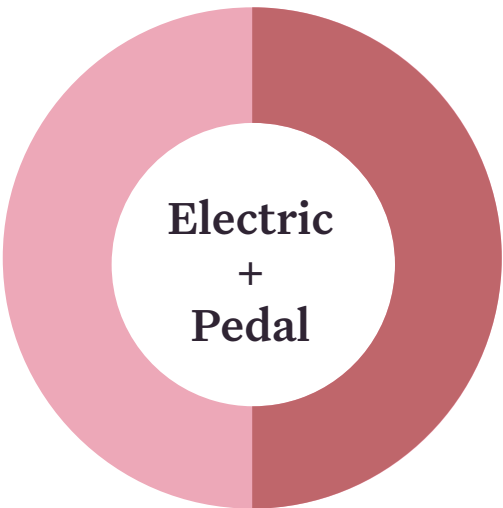


- Accounts for e-bike preference while still serving those who prefer pedal bikes
- Ensures that even if charging issues occur, there will still be some bikes available

Recommendation

Launch with a 75%–25% split, making e-bikes available to the majority of riders likely to use them, while offering pedal bikes for those who prefer. Re-evaluate the split after pilot operations, and incorporate cargo and recumbent bikes upon expansion to meet more riders’ needs.

50% Electric | 50% Pedal



- Provides equal use and access
- Project operating costs are balanced in the middle

100% Electric-assist



- Electric bikes are 2-2.5x more used than standard pedal bikes
- Highest cost system
- Those who feel unsafe on faster e-bikes may not want to use the system

System Recommendations

Equipment: Stations

Bike share systems may either be docked or dockless.

Docked Systems

Rides start and end from designated locations, which may have a bike rack or similar setup.

Dockless Systems

Users can start or end rides anywhere within allowed zones, where riders deploy the kickstand and lock their bike.

Dockless Discontent

As noted in the engagement section, we found significant reservations among the public and key stakeholder about dockless bike and scooter share systems. Concerns centered around bike “litter” and obstructions to sidewalks and streets.

Docks on Public Property



PROS

- Greater flexibility
- Umbrella agreement for station locations

CONS

- Public complaints can restrict dock locations and expansion

Docks on Private Property



PROS

- Minimal obstacles to placement
- Fewer public concerns

CONS

- Agreements with multiple individual parties

Dockless



PROS

- Maximum user flexibility

CONS

- Difficult to find bikes
- Bikes can clutter or obstruct sidewalks and streets

System Recommendations

Connecting the Hudson Valley

There are economies of scale and operational advantages to be gained by placing the Newburgh-Beacon bike share system within its broader regional context. By banding together to support an integrated bike share system, neighboring communities can create an opportunity to improve access to transportation alternatives, strengthen the ties between their cities, and promote sustainable, convenient mobility.

If all participating communities arrange to work with one operator they improve their negotiating position and can offer simplified logistics. An operator could maintain one or two operations and repair hubs to serve the region rather than establishing separate bases in each city. Riders would have the benefit of a unified subscription that enables them to access bikes not just at home, but in nearby towns as well.

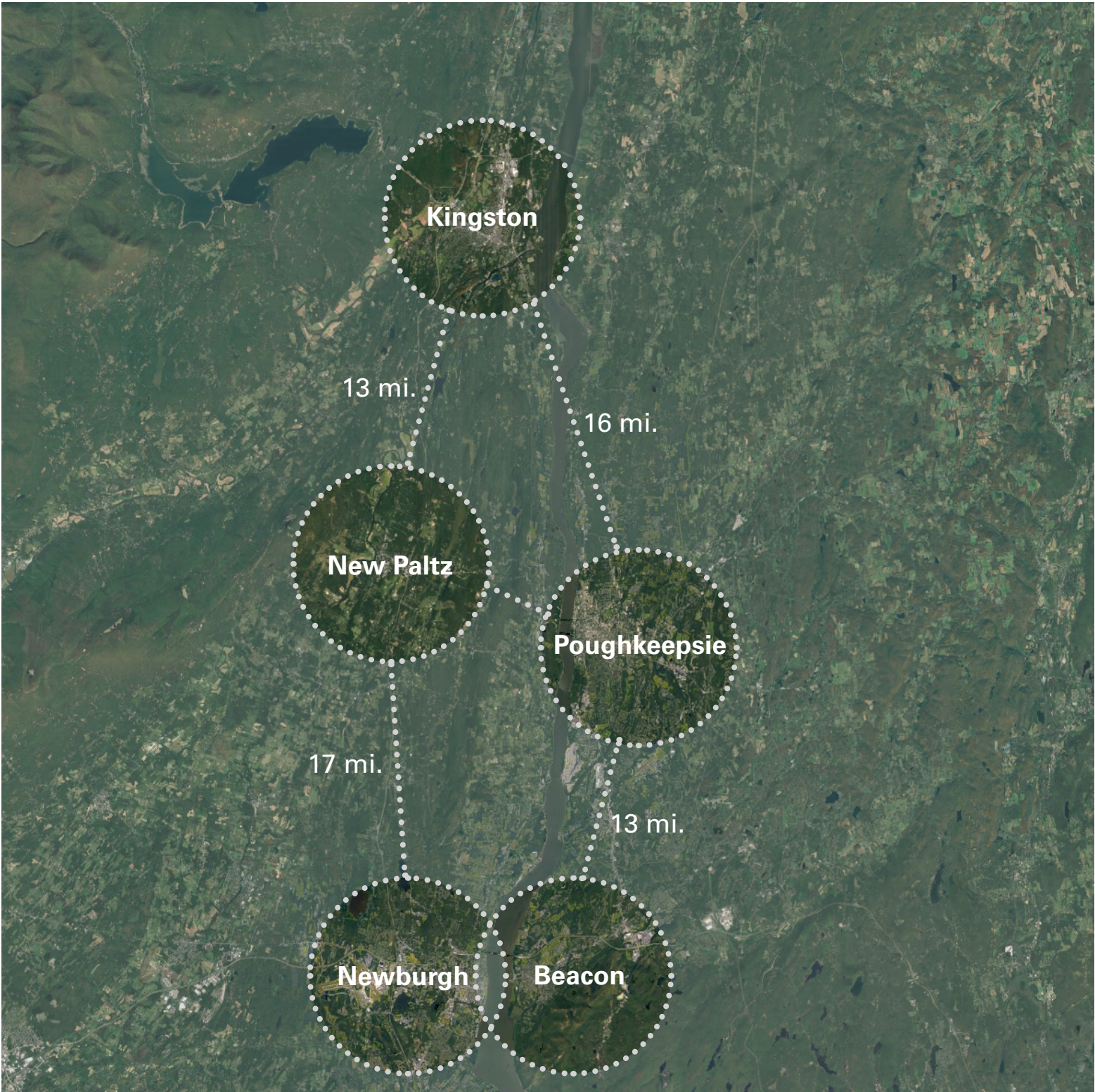
In addition to Newburgh and Beacon, there are active clean mobility planning efforts underway in the City of Kingston and at SUNY New Paltz, all funded through the same NYSERDA Clean Mobility Planning grant and all exploring the option of introducing bike share systems in their communities.

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Hudson Valley Regional Bike Share System

Recommendation

Coordinate with ongoing planning efforts in Kingston and New Paltz, and reach out to other interested communities to establish an integrated, regional bike share system.

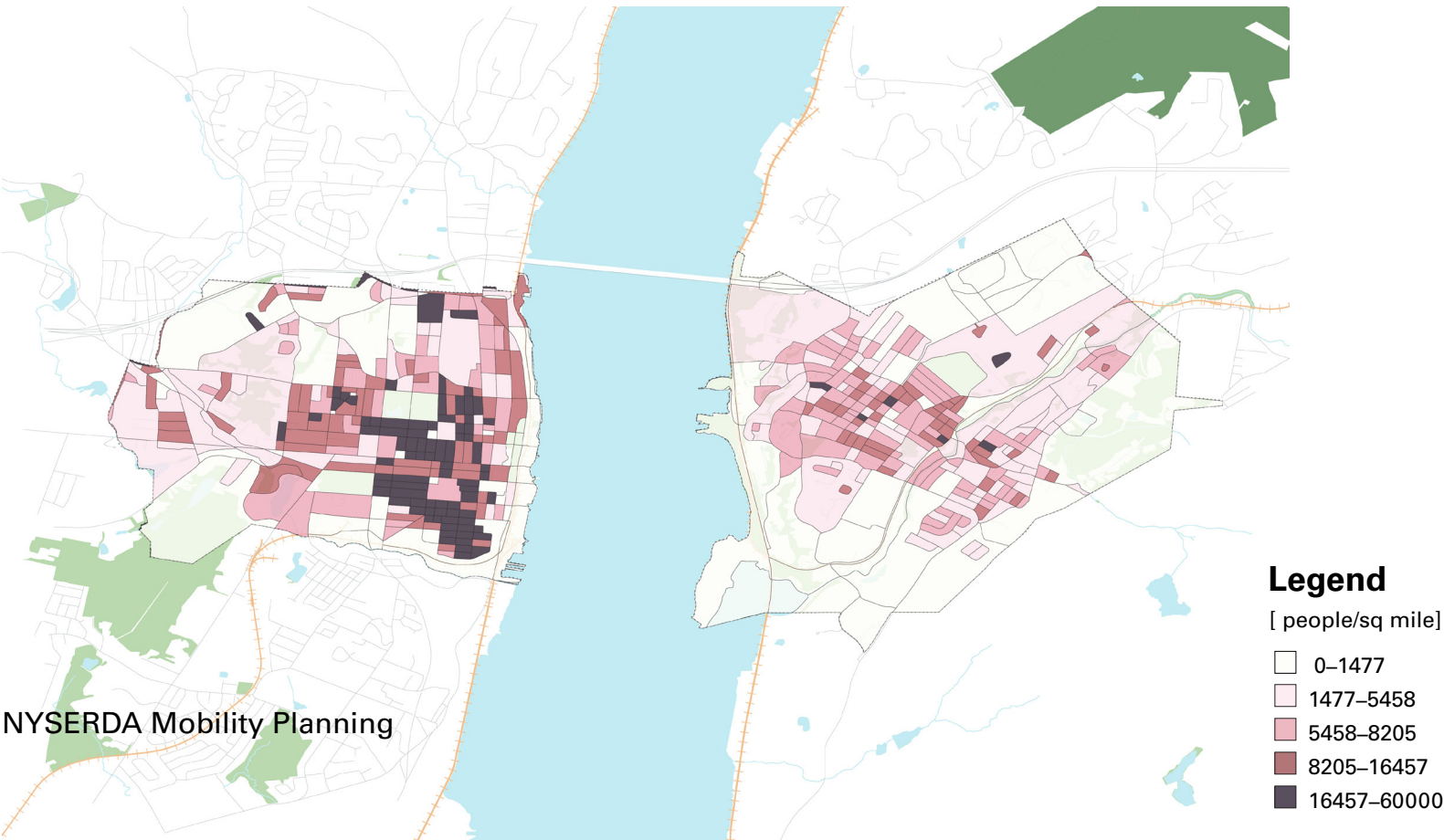


Appendix

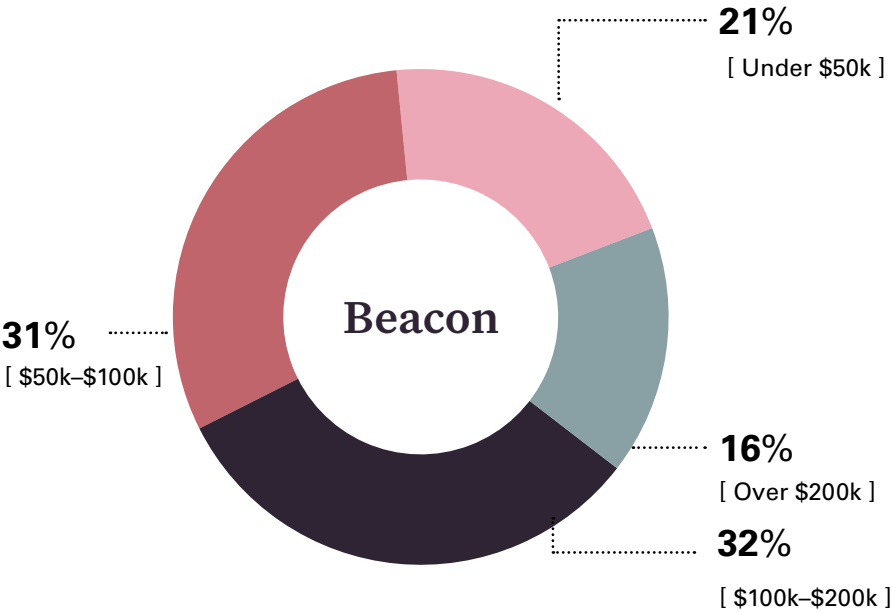
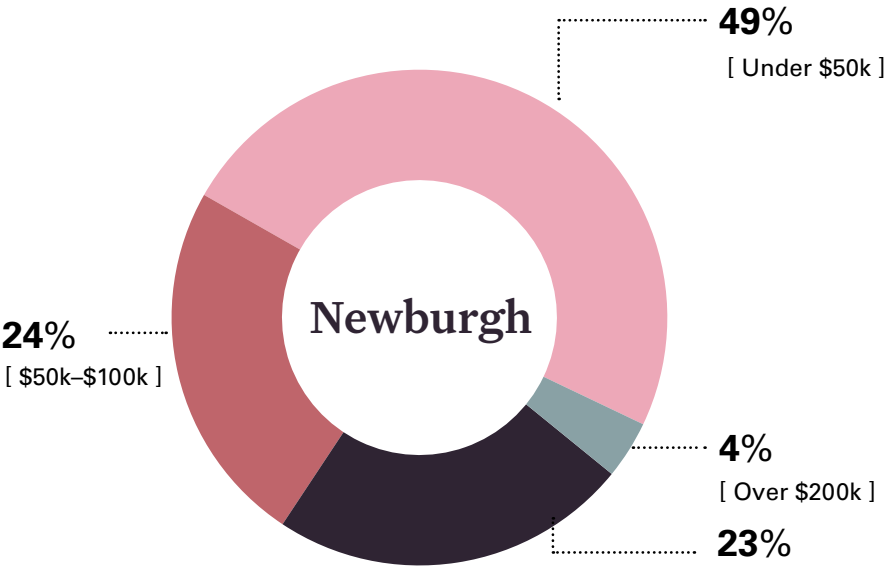
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Demographics

Population Density



Household Income



In **2023**, the poverty threshold for a four-person family with two children was **\$30,900**.

Source:
Mid-Hudson Valley Community Profiles