



RUTGERS

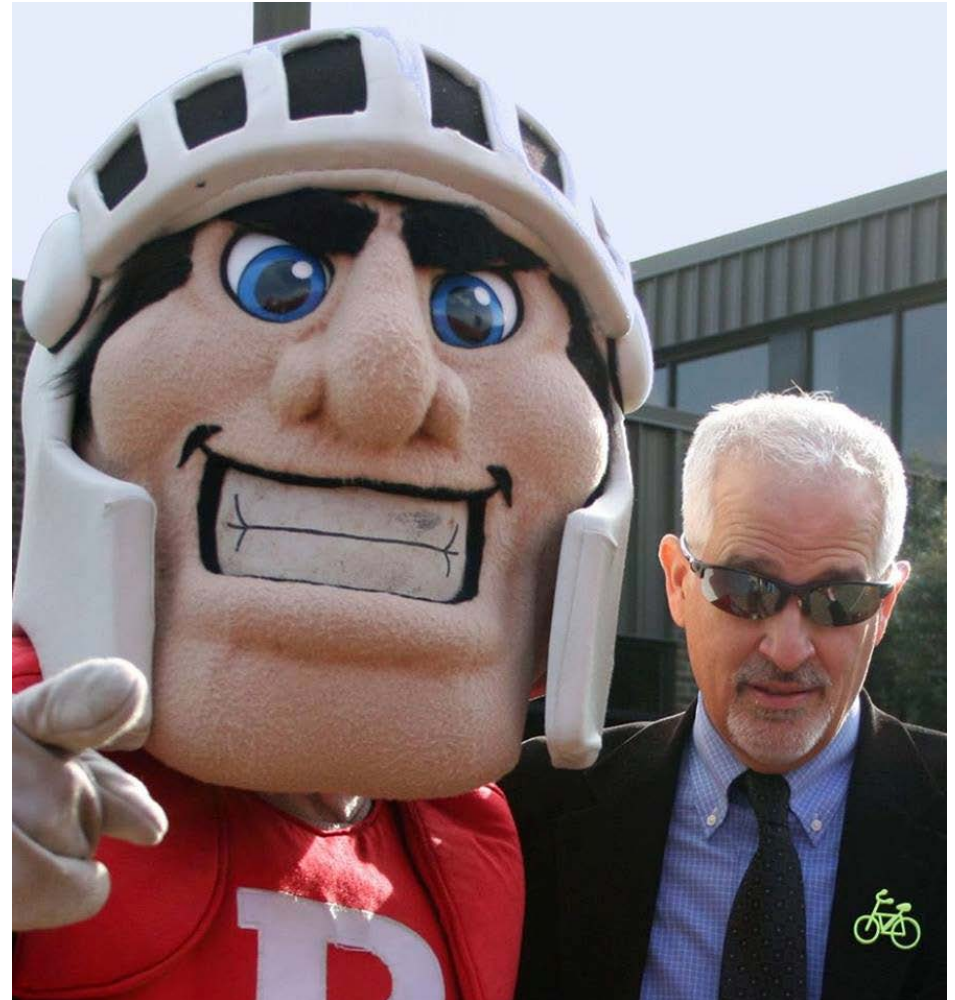
***Regional Bicycle Share Program***  
*Knight Cycle*

Every Day Counts Stakeholder Partnering Session – NJDOT / FHWA  
August 4, 2017



## Knight Cycle

- Regional, open and public bike share system
- 350 smart bicycles
- 35 GPS-defined hubs
- Designed for short trips with high turnover
- Managed by Rutgers University





## Regional Partners

- City of New Brunswick
- Borough of Highland Park
- Township of Piscataway
- Middlesex County
- Keep Middlesex Moving
- New Jersey Transit
- New Jersey Department of Transportation (NJDOT)
- North Jersey Transportation Planning Authority (NJTPA)



Proposed Service Area

# Implementation and Operational Roles

## Rutgers' Role

- Manage grant funding process
- Program implementation
- Program administration and contract management
- Fund and oversee operations for regional system

## Partner's Role

- Participate in public involvement process
- Site and install bicycle racks (provided by Rutgers) at identified hubs
- Provide snow removal for bicycle racks in your jurisdiction
- Ensure bicycle racks in your jurisdiction are in good working order



## Program Goals

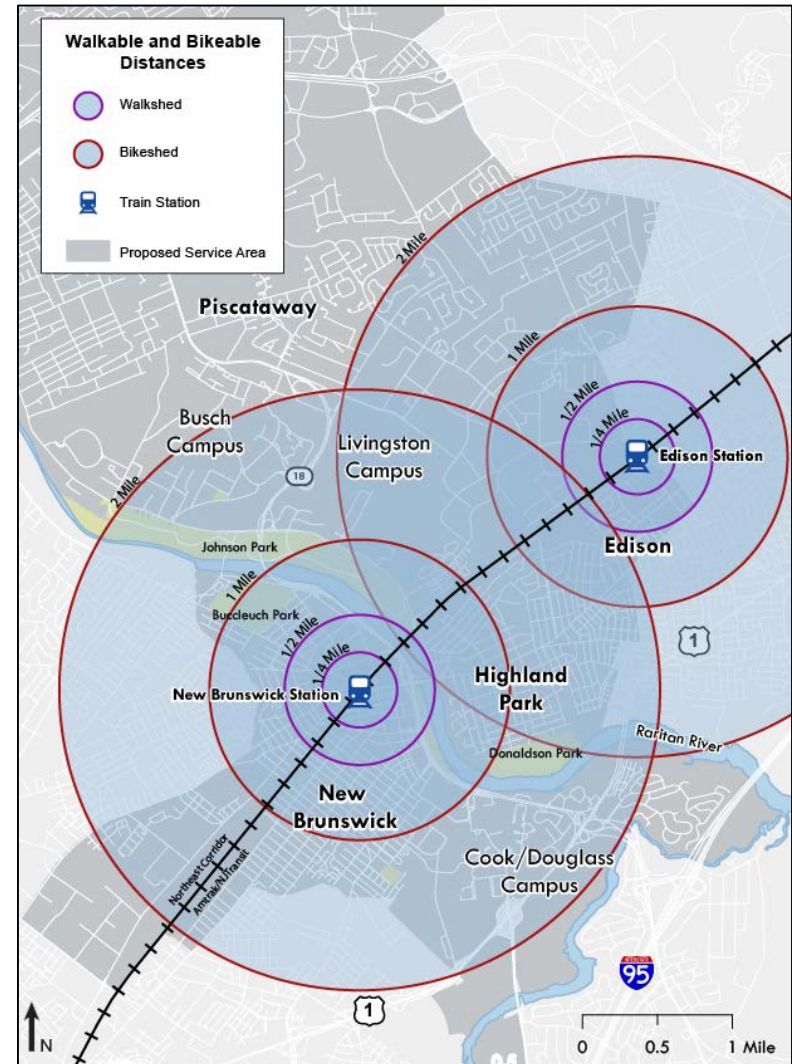
- Increase bicycling as part of regional mode split and promote bicycling culture
- Promote non-motorized, active transportation
- Solve “last-mile challenge” when traveling to and from transit stops
- Provide affordable transportation alternative to improve regional mobility and access
- Reduce regional traffic congestion
- Mitigate university transit demand
- Collect robust bicycling demand data to support demand for future bicycle facilities





## Last Mile Challenge

Walkable vs. bikeable distances from nearby train stations

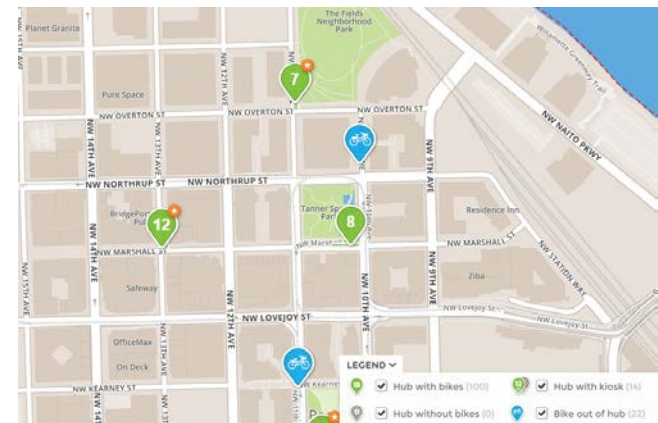


# System Design

- Smart Bicycle Technology
  - Find and reserve bicycle through website, mobile app, on-bicycle interface or public kiosk
  - PIN unlocks bicycle
  - All technology to check out, check in or lock a bicycle contained on the bicycle itself
- GPS-Defined Hubs
  - GPS technology identifies a virtual hub
  - Typically a center of activity with bicycle racks available
  - No permanent docking stations necessary



Hudson Bike Share, Hoboken, NJ



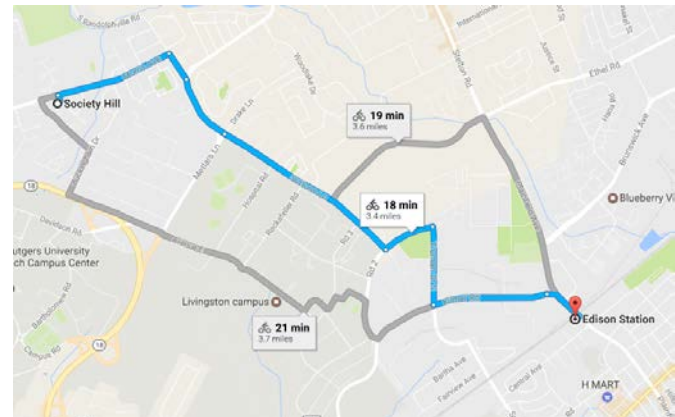
Bike Town Hub Map, Portland, OR

# Smart Bike Share Benefits

- Flexibility
  - No docking stations
  - Bicycles lock to existing bike racks
  - Hubs can be virtually relocated using web interface
  - Users can make intermediate stops during their trips
  
- Robust Data Collection
  - GPS on every bicycle
  - Calculates trip distance
  - Identifies users' chosen routes
  - Garner support for future bicycle infrastructure projects



Smart bikes locked at conventional bike racks

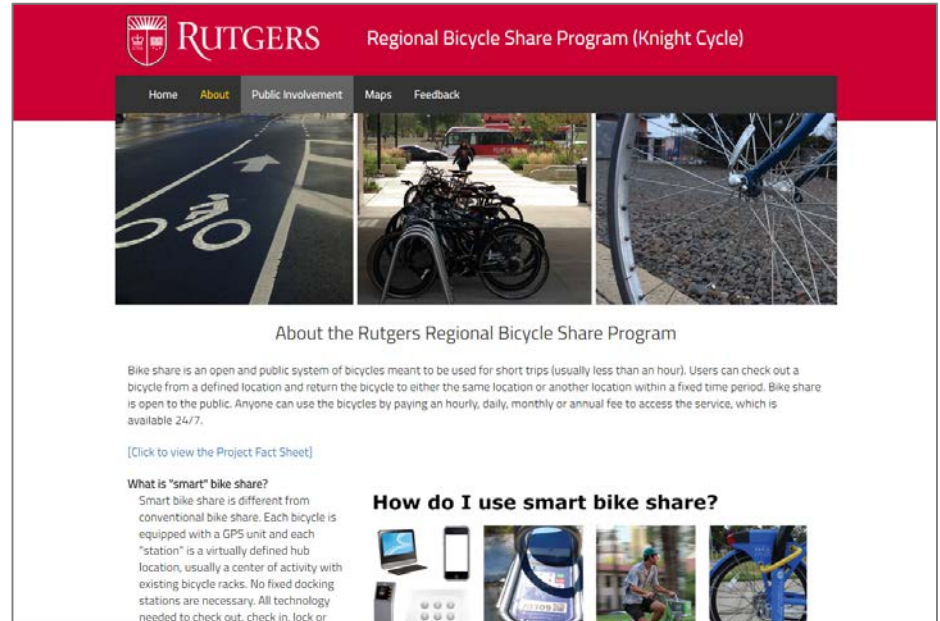


Route visualization data



# Spring 2017 Public Involvement

- Community Input Survey
- Program Website
- Dedicated E-mail
- Public Officials' Meeting
- Stakeholder Meeting
- Public Information Centers (9)
- Social Media Engagement



The screenshot shows the website for the Rutgers Regional Bicycle Share Program (Knight Cycle). The header includes the Rutgers logo and the program name. A navigation menu has links for Home, About, Public Involvement, Maps, and Feedback. Below the menu are three images: a bicycle lane with a white arrow and bicycle symbol, a row of bicycles parked in a rack, and a close-up of a bicycle's front wheel and handlebars. The main content area has a heading "About the Rutgers Regional Bicycle Share Program" followed by a paragraph explaining that bike share is an open and public system of bicycles for short trips, available 24/7. A link is provided to view the Project Fact Sheet. Below this is a section titled "What is 'smart' bike share?" which explains that smart bike share uses GPS and virtual stations. To the right of this text is a section titled "How do I use smart bike share?" with a row of five small images showing a laptop, a smartphone, a bicycle dock, a person riding a bicycle, and a close-up of a bicycle's front wheel.

# Spring 2017 Public Involvement

- Connected with nearly 150 stakeholders, public officials and members of the public
- Over 100 comments, suggestions and questions on the program
- Over 300 hub location suggestions



# Findings – Bicycle Share Program

- Most Frequent Comments:
  - Need for improved bicycle infrastructure in addition to bicycle share
  - Importance of strategic hub locations and hub density
  - Questions regarding type of system, features and operations
  - Equity in terms of language barriers and cash payment options
  - Importance of outreach

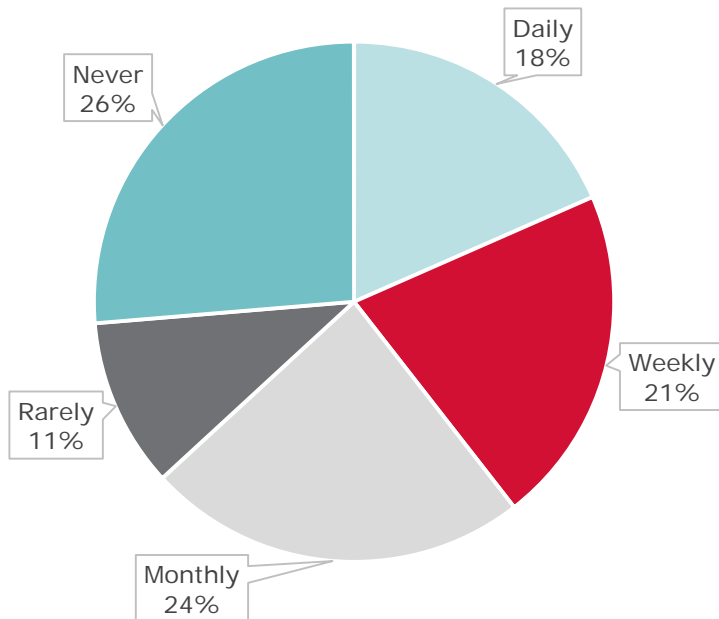




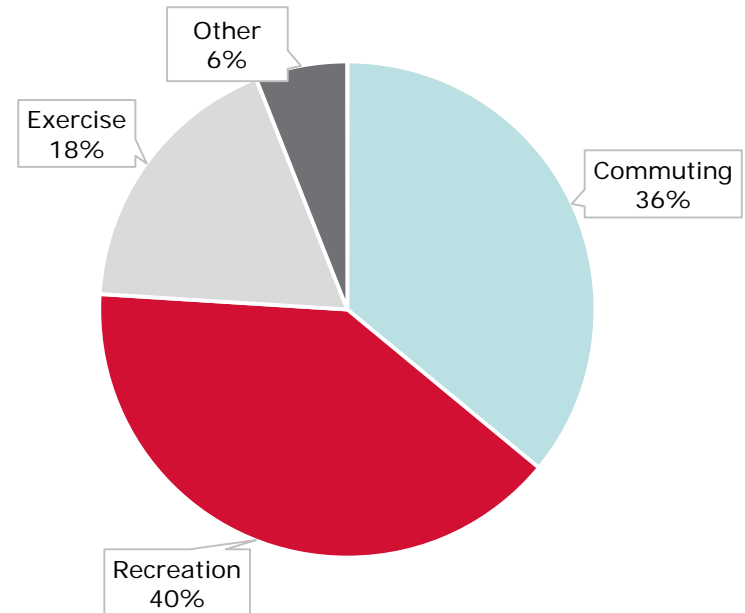
## Survey Findings

\* Approximately 50 Survey Respondents

How often do you ride a bicycle?



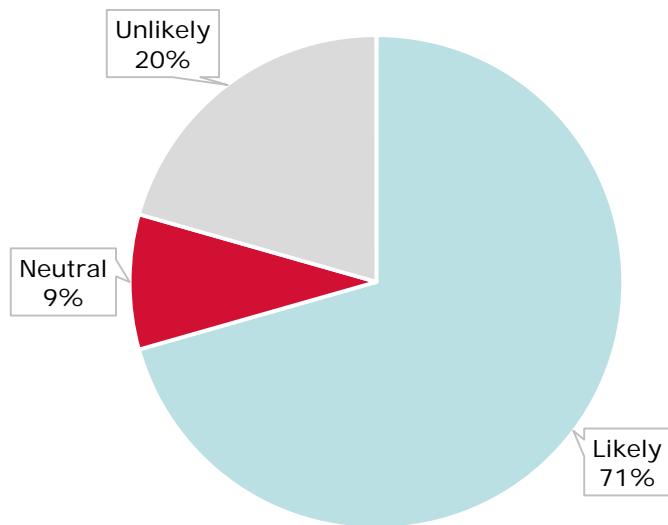
Why do you typically ride a bicycle?



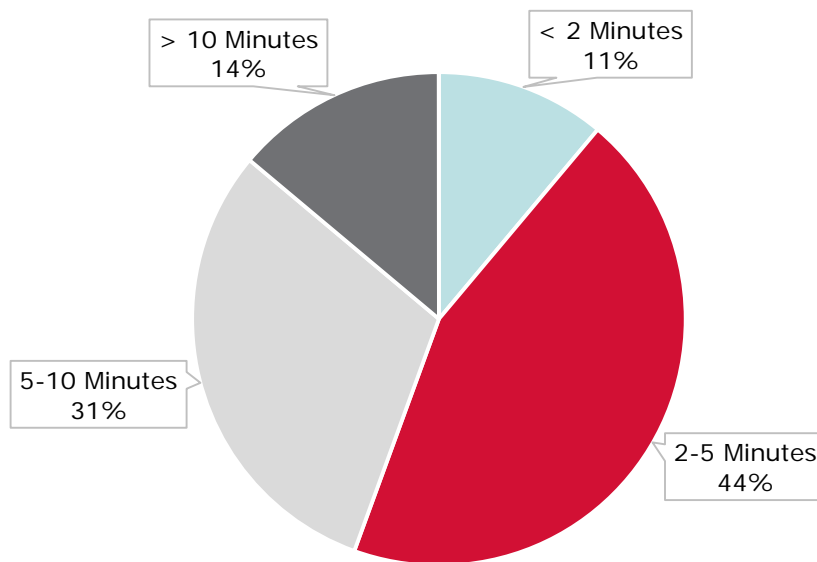
# Survey Findings

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How likely are you to use bicycle share?

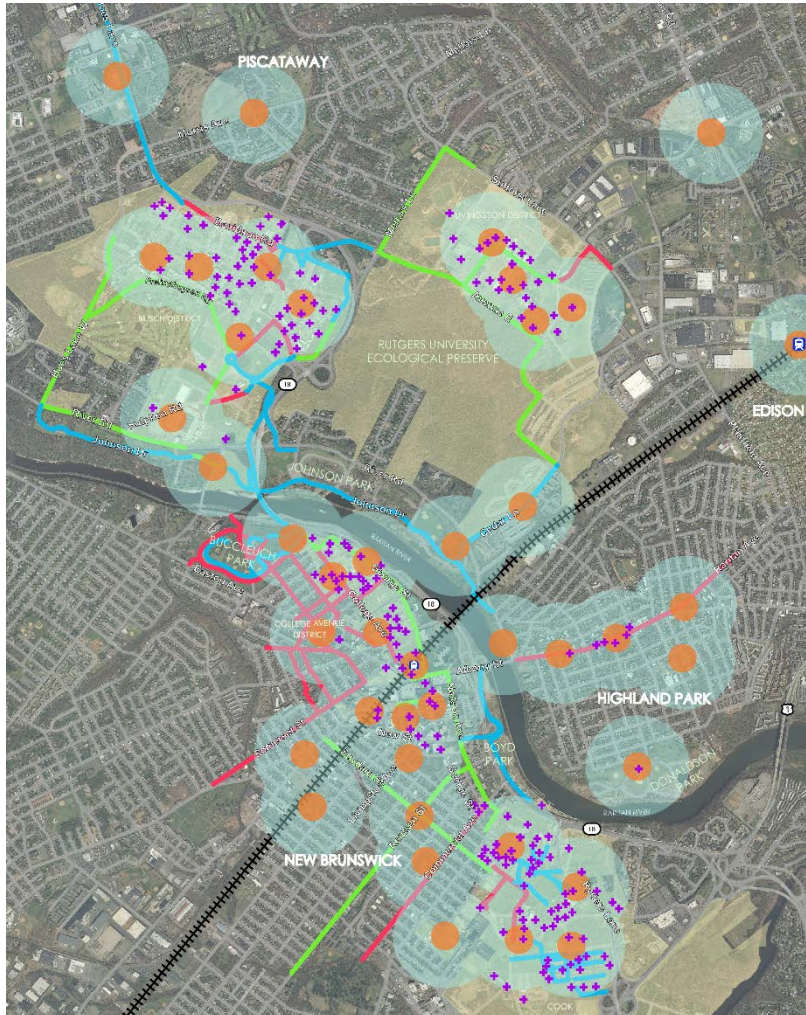


How far are you willing to walk to pick up a bicycle?





## Hub Locations - Coverage



- Recommended hub locations with ¼ mile buffer
- Approximately a five-minute walk



## Next Steps

- ~~Knights Cycle Advisory Group~~
- ~~Site hub locations in coordination with public officials~~ **SPRING 2017**
- ~~Environmental Review~~
  - ~~Seek categorical exclusion for program and hub locations~~
- ~~Resolutions of Support~~
  - ~~Local elected officials demonstrate support for program scope and hub locations~~
- RFP and Vendor Selection **SUMMER 2017**
- Submit Authorization Package
- Program Development and Rollout **FALL 2017-SPRING 2018**

# Questions?

