Vienna-Fairfax-Mason Bikeshare Feasibility Study

City of Fairfax
City Council Update
November 6, 2018
Agenda

- Study Background and Goals
- Activity To-Date
- Existing Conditions, Opportunities, and Challenges
- Technology Options
- Preliminary Recommendations
- Schedule and Next Steps
What is Bikeshare?

- Transportation system ideal for short one-way or round trips
  - Users rent a bicycle at a station and return to any other station.
  - Other systems allow for stationless ("dockless"), and/or e-assist bikeshare, and/or e-scooter share.
Why Bikeshare?

- Part of a flexible multimodal system (“mobility on demand”)
- Complements and extends the reach of transit
- Provides first and last mile connections
- Provides options for short trips
- Increases use of active transportation, supports a “safety in numbers” effect
- Reduces reliance on vehicles, reduces associated impacts of vehicle travel
- Cost-effective travel option
- Increases economic activity in commercial areas
Study Background

- City goal: Provide viable and attractive mobility choices
- Best practices include shared mobility options

Multimodal Transportation

Goal 2

**ACTION MM2.3.5** Complete a bikeshare feasibility study including definition of necessary station density, recommended “starter system,” operating and management structure, and funding program, preferably in partnership with George Mason University.

**ACTION MM2.3.6** Provide initial support to establish bikeshare in the City.
Study Partnership

- Collaboration between multiple jurisdictions to complete feasibility study
- Sets the stage for continued coordination and development of a regional system
Study Activities To-Date

- Refine vision and goals for potential bikeshare system
- Conduct public outreach
- Evaluate existing conditions, opportunities, and challenges
- Review technology options, benefits, and costs
System Goals

- Connect to trails, transit, and regional transportation options
- Increase healthy living and active transportation options
- Increase attractiveness of area for employers, business, and tourism
- Ensure affordable transportation options with access to all
- Enhance sustainable transportation options and relieve congestion
- Implement a sustainably funded and operated system
Online Public Engagement

- Website & social media
- Survey (online and at events)
- Interactive maps (online and at events)

Fairfax City-Mason-Vienna Region Bikeshare Feasibility Study

Do you support bikeshare in the Fairfax City-Mason-Vienna study area?

Strongly Support

Strongly Oppose
Public Outreach Events

- Bike to Mason Day
- Bike to Work Day
- Rock the Block
- Mason “Get Connected” Fair
- Farmers’ Markets (Fairfax and Vienna)
- Rail station pop-ups (Vienna Metro and Burke VRE)
- Fairfax Fall Festival
Public Input

- 180 responses to online survey
- 29 bikeshare station location suggestions online
- Numerous bikeshare system preferences noted and bikeshare locations suggested at pop-up events

![Survey Results Chart]

Do you support bikeshare in the Vienna-Fairfax-Mason study area?

- 84% Strongly Support
- 7% Strongly Oppose
- 3% Oppose
- 0% Neutral
- 7% Support
Existing Conditions

- **Opportunities**
  - Connections to Metrorail stations and Fairfax bikeshare network
  - Flat topography along Route 123 corridor
  - Activity centers at GMU, Vienna, City of Fairfax, Tysons Corner

- **Challenges**
  - Transit service gaps
  - Topography in parts of the study area
  - Limited bike infrastructure
Demand Analysis

- Point scoring system used weighted values.
- Demand criteria included employment and population density, attractions, transit, and equity measures.
Bike Infrastructure and Topography

[Maps showing bike infrastructure and topography]
Equity and Population
Demand Maps

- Demand mapping results indicate high potential for bikeshare usage at:
  - Tysons Corner
  - Vienna Metro
  - City of Fairfax
  - George Mason University
  - Burke VRE
Regional Integration

- **Opportunities:**
  - Extend the reach of existing systems (Capital Bikeshare system and dockless mobility programs)
  - Enhance connections to regional transit (Metrorail, commuter bus, VRE)
  - Connect with existing area bikeshare members

- **Considerations:**
  - Interoperability of multiple bikeshare technologies
  - Cost and revenue sharing arrangements
  - Regional coordination issues
Bikeshare Technologies

- Smart Dock
  - Station-Based Docking Systems
  - Technology Located at Station
- Smart Bike
  - Technology Located on Bike (GPS, Transaction Terminal, and Lock)
  - Minimal stations needed for system
- Dockless
  - Technology Located on Bike (GPS, Transaction Terminal, and Lock)
- E-assist Scooters
  - Technology Located on Scooter (GPS, Transaction Terminal, and Lock)
Smart Dock

Pros:
- Capital Bikeshare is an established system in the region
- Stations organized, visible, and iconic
- Proven and tested technology
- Reliable for users to find a bike

Cons:
- Siting requires long contiguous space
- More expensive technology
- Relies on more components
- More time to implement
Smart Bike

• Pros
  • Stations can be made visible and iconic
  • Secure locking technology
  • Organized
  • Proven and tested technology
  • Reliable for users to find a bike
  • Flexible for users to park a bike
  • Flexible, modular, and easier to site

• Cons
  • Moderately expensive technology
  • Less predictable for operator
  • No established system in the D.C. area
Dockless

- Pros
  - Flexible for users to park a bike
  - Easy and fast to implement
  - Scalable for small or large systems
  - Inexpensive technology and no cost to cities
  - Easy to access and use

- Cons
  - Less organized
  - Less agency control
  - Less proven and tested technology
  - Less reliable for users to find a bike
E-Scooters

Pros
- Flexible for users to park a scooter
- Easy and fast to implement
- Scalable for small or large systems
- Inexpensive technology and no cost to cities
- Easy to access and use
- May be used by a wider set of people than bikes

Cons
- Less organized and less agency control
- Less proven and tested technology
- Less reliable for users to find a scooter
- May introduce issues such as riding on the sidewalk
Preliminary Recommendations

- Prioritize connections to transit, trails, and destinations (Vienna and Fairfax city centers, Mason)
- Leverage existing and planned bikeshare connections
- Pursue multiple bikeshare technologies using a phased approach
Key Takeaways

- Bikeshare is feasible and advances City goals but requires supporting actions:
  - Concurrent improvements to bicycle infrastructure
  - Review of policies and regulations related to bicycles and emerging shared mobility options
  - Ongoing staff support and operational subsidies (offset by revenues from user fees and sponsorships)
- Benefits and tradeoffs exist with each technology – likely a balanced combination of docked and dockless options will be most effective to serve a variety of users
Schedule & Next Steps

- Refine recommendations and develop implementation plan
  - Phasing
  - Business plan
- Final implementation plan (December)
- Application for I-66 Commuter Choice funding to implement
  - December resolution of support
- Finalize bikeshare station locations with additional input (Spring 2019)
Questions?