



# Transit With Bikes: Sharing: Overview of Practice and Potential

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*October 16<sup>th</sup>, 2012*

# What is Bikesharing?

- Anyone can check out a publicly available bike with a membership, or by paying a fare
- One-size-fits-all, upright, basic bicycles intended for short trips and errands
- Typically, bikes stored at a station, and can be returned to any other station within the network
- Can close the first/last mile transit barrier



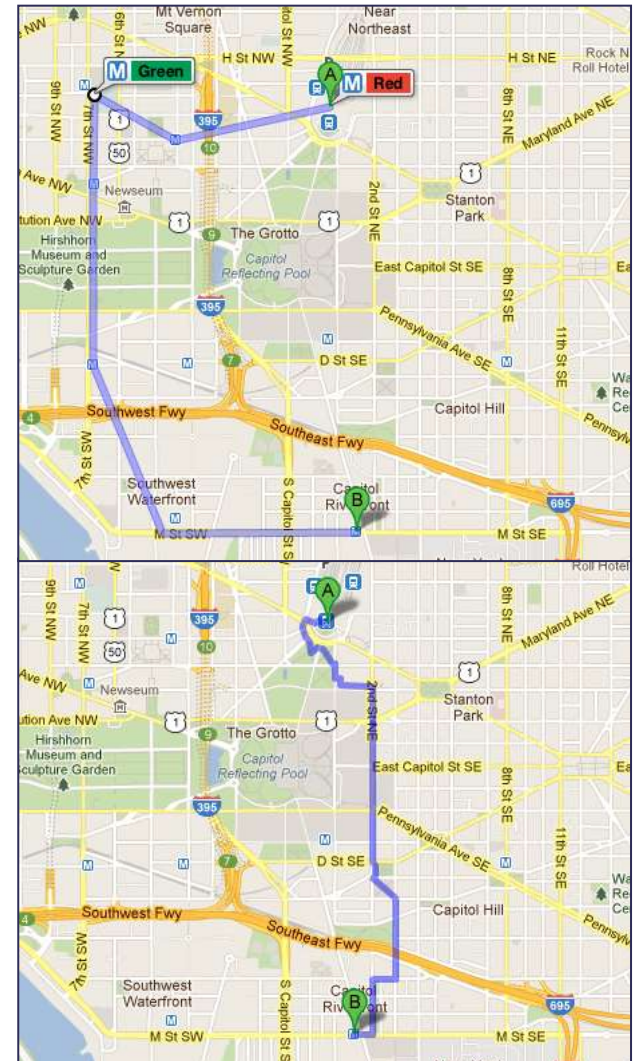
# Avoiding Waits and Deviations

- No waiting for a vehicle (ideally)
- Washington DC's Union Station
  - Most common 2011 origin/ destination for bikeshare trips to/from USDOT bikeshare station\*
  - For commuter rail/ Amtrak riders, avoids two transfers to/on Metrorail
  - Avoids \$2.15 in subway fare each way\*\*
  - Peak period six minute predicted time savings each way\*\*\*

\*Capital Bikeshare 2011 data presented at [JDLand.com](http://JDLand.com)

\*\*Peak-of-the-peak non-discounted fare only, does not account for CaBi membership costs

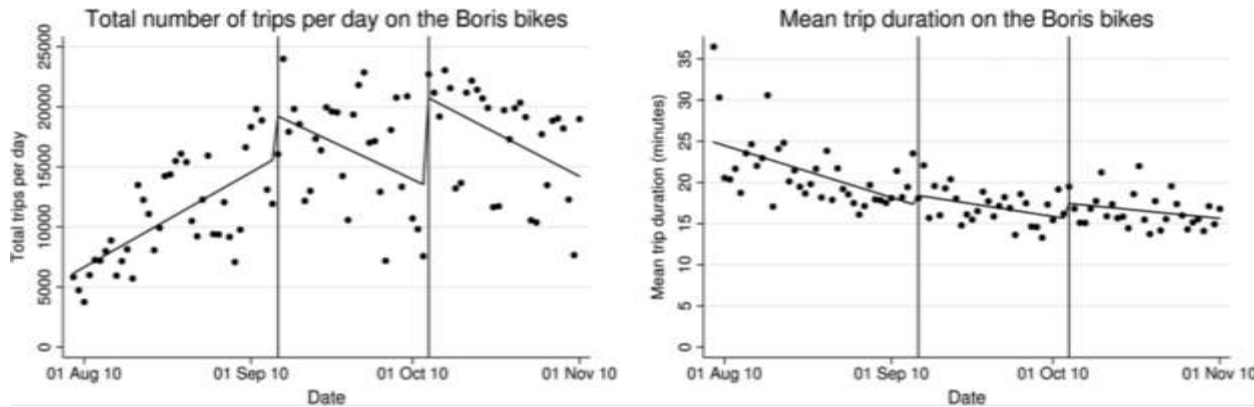
\*\*\*Google Maps predicted travel time difference between modes at peak time period



**Why? How? Future?**

# Service interruptions

- Capital Bikeshare bridges Metrorail service outages
  - Oct 2010 weekend shutdowns\*
- BorisBikes and London Underground strike\*\*



\*Greater Greater Washington, Oct 2010, <http://greatergreaterwashington.org/post/7521/take-cabi-during-this-weekends-metro-trackwork/>

\*\*Fuller, D., Sahlqvist, S., Cummins, S., Ogilvie, D. The impact of public transportation strikes on use of a bicycle share program in London: Interrupted time series design. 2012, *Preventive Medicine* 54, 74–76

**Why? How? Future?**

# Sustainable Operating Cost Recovery

System	Cost Recovery
Capital Bikeshare (DC)	120%*
Capital Bikeshare (VA)	53%*
B-Cycle Denver	Approx 100%**
Nice Ride Minneapolis	Approaching 100%**

\*DeMaio, P. "Capital Bikeshare Striving to Become Financially Self-Sufficient," *The Bike-Sharing Blog*, <http://bike-sharing.blogspot.com/2012/02/capital-bikeshare-striving-to-become.html>

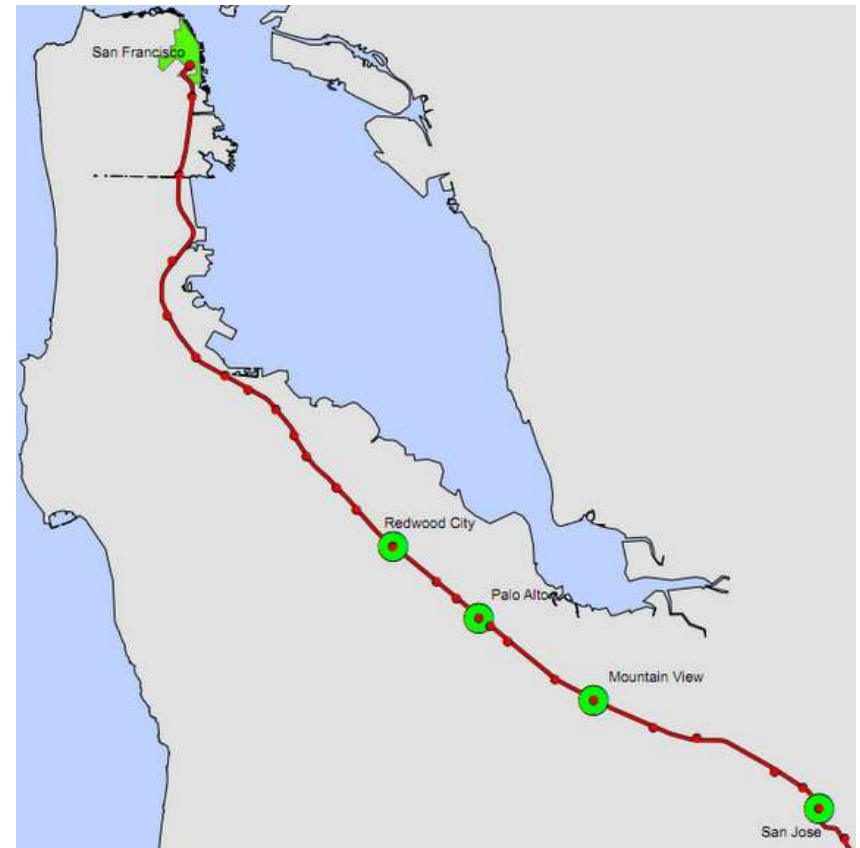
\*\*Virginia Tech Studio Class, "Capital Bikeshare Study: A Closer Look at Casual Users and Operations," Jan 2012, <http://ralphbu.files.wordpress.com/2012/01/vt-bike-share-study-final3.pdf>

**Why? How? Future?**



# Station Co-location

- San Francisco Bay Area
- Fall 2012
- Nodes of system separated by 50 miles, connected by Caltrain
- <http://www.baaqmd.gov/Divisions/Administration/RFP-RFQ/Open-RFP-RFQ.aspx>



*Why? How? Future?*

# System Co-Branding and Mapping

“Common liveries and ‘branding’ for vehicles, stops, maps, and timetables help passengers appreciate that a public transport system really does work as a network...”

--Paul Mees, *Transport for Suburbia*

- Very few systems worldwide share branding with counterpart transit system
- Sponsorship/advertising is a further obstacle
- Ad swaps (Denver Bicycle and RTD)
- Maps and Apps could be shared (Boston pursuing)



All pictures courtesy of godcgo.com

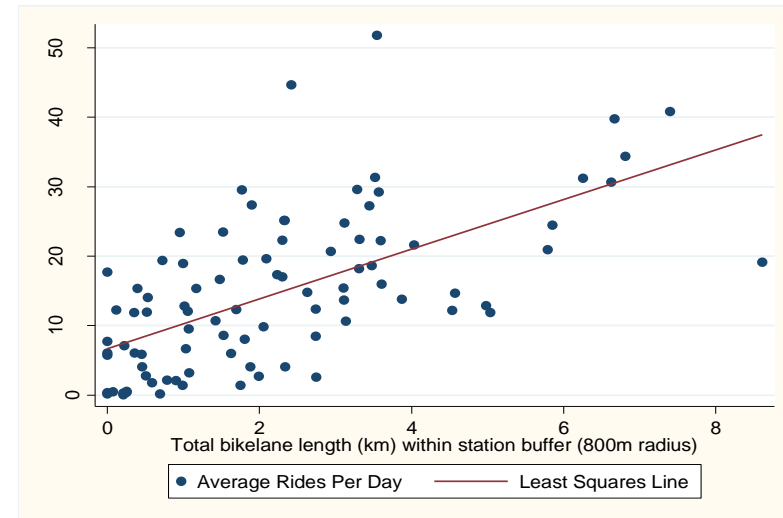
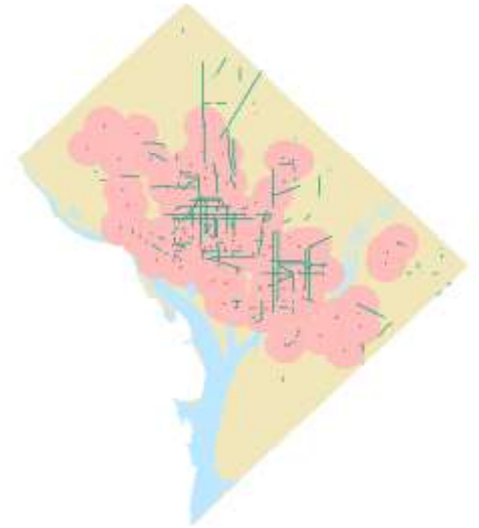
**Why? How? Future?**

# Bike Travel Facilities Near Stations

- Important for bike/transit integration generally
- Especially important for bikeshare
  - Generally less experienced riders
  - Slower heavier bicycles
- Demonstrated correlation between bikeshare and bike lanes\*
- FTA Catchment Policy
- New Multimodal Level of Service in Highway Capacity Manual

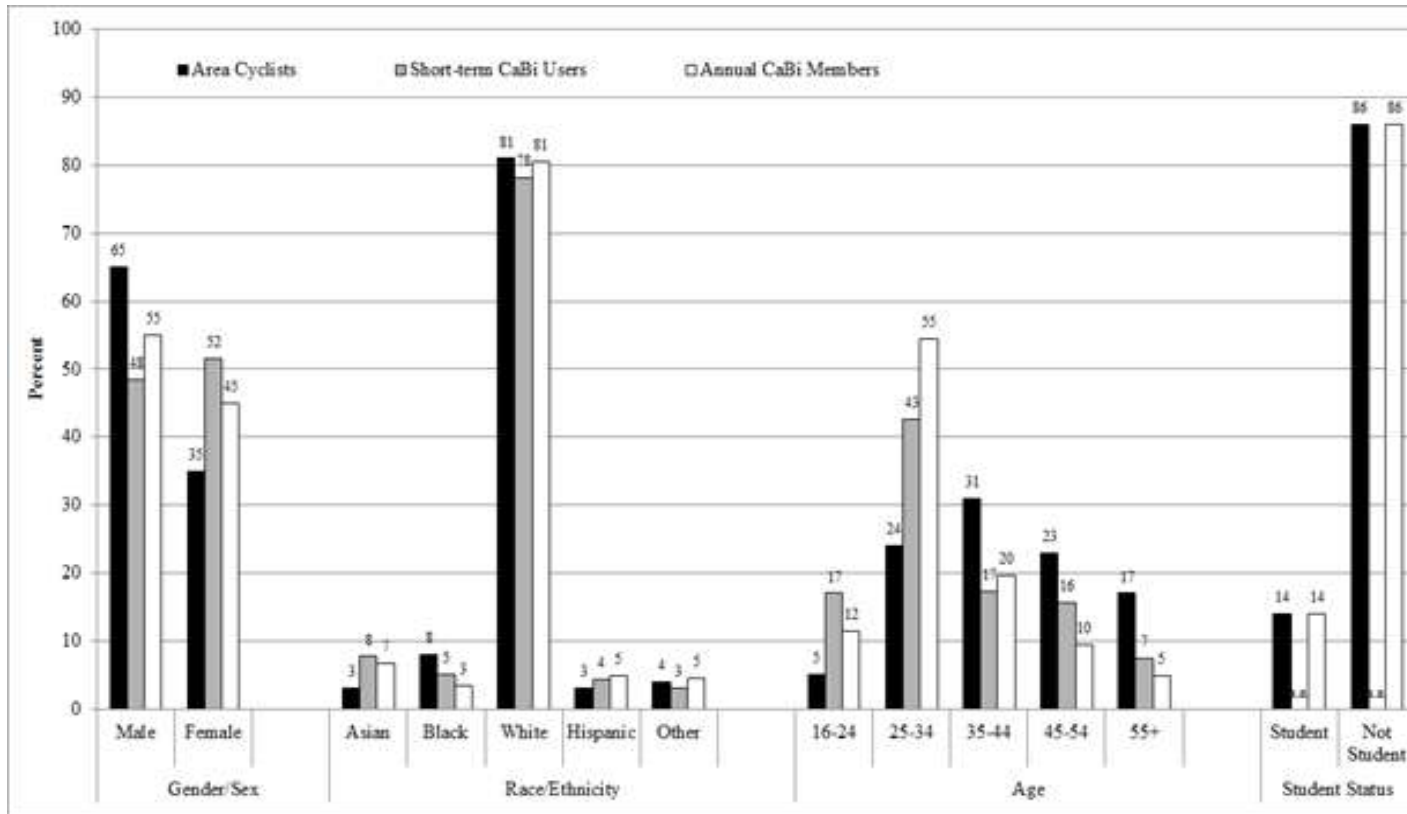
\*Buck, D., and Buehler, R., 2012. *Bike Lanes and Other Determinants of Capital Bikeshare Trips*. 91<sup>th</sup> Transportation Research Board Annual Meeting, #12-3539

**Why? How? Future?**





# Equitable Access to Bikeshare



- Assisting targeted populations
  - Financial (cost, deposit, installment plans, farecard)
  - Promotion (marketing/outreach)

Graph from forthcoming paper “Are Bikeshare Users Different from Regular Cyclists? A First Look at Short-Term Users, Annual Members, and Area Cyclists in the Washington, DC Region,” to be presented at 2013 TRB Annual Meeting

**Why? How? Future?**

# Common Farecard

- Allow seamless transfers between transit/bikeshare
- Stated desire for common account #s in San Francisco Bay Area, interest expressed in Washington DC and NYC
- Hardware, institutional, and taxation obstacles



*All pictures courtesy of Santa Clara Valley Transportation Authority, [vta.org](http://vta.org)*

***Why? How? Future?***

# Roundtrip Workday Rentals

- Lets user take bike to work in morning, return to same station in evening
- Expands destinations to those without bikeshare docks
- OV-fiets (Netherlands)
  - 85,000 members, 230 stations, 5000 bikes
  - €10 annual fee, + €3 for 24 hrs use\*
- Brompton Dock
  - Folding bikes from lockers
  - €50 annual fee \*\*

\*<http://www.aviewfromthecyclepath.com/2011/03/bike-share-dutch-way.html>

\*\* <http://www.bromptondock.co.uk/>



*Why? How? Future?*



## Example

- Montpellier, FR (Mediterranean coast)
- 50 stations, operated by and co-branded with transit authority
- 1500 bikes, 800K rides in 2008\*
- Free day-use by transit pass holders, fully integrated fare system
- Bikeshare rentals also available
- Leisure bikes at beach/country stations for tourist package use
- Along with other measures, 10-year transit rides increased 2.4 times\*\*



\*Veolia Transport webpage, "Bike Hire and Car Sharing," accessed 2/28/12, <http://www.transdevplc.co.uk/our-expertise.jsp?expertiseld=7>

\*\*Le Tourneur, Marc. "Parking management and new mobility services key to increasing ridership for public transport operators." *Public Transport International*, Jan/Feb 2012.

**Why? How? Future?**

# Connecting Moderate-Distance Transit to Dense Communities

- Silver Line Metro station to be located in median of toll-road
- Reston Town Center compact development nearly half-mile to the north
- No parking at transit station



*Why? How? Future?*



# Please Share Your Thoughts and Ideas With Me



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- FTA – <http://www.fta.dot.gov/bikesandtransit>
  - Includes FAQs on SAFETEA-LU funding, Bike/Ped catchment policy
- NACTO -- [http://nacto.org/bike\\_share/](http://nacto.org/bike_share/)
- PBIC -- <http://www.bicyclinginfo.org/promote/bikeshare.cfm>
- CUTR -- <http://www.cutr.usf.edu/index.shtml>