Transit With Biking: Overview of Practice and Potential

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Rail-Volution
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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
**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**

**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
# Sustainable Operating Cost Recovery

<table>
<thead>
<tr>
<th>System</th>
<th>Cost Recovery</th>
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</thead>
<tbody>
<tr>
<td>Capital Bikeshare (DC)</td>
<td>120%*</td>
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<tr>
<td>Capital Bikeshare (VA)</td>
<td>53%*</td>
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<tr>
<td>B-Cycle Denver</td>
<td>Approx 100%**</td>
</tr>
<tr>
<td>Nice Ride Minneapolis</td>
<td>Approaching 100%**</td>
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</tbody>
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Station Co-location

- San Francisco Bay Area
- Fall 2012
- Nodes of system separated by 50 miles, connected by Caltrain

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 Bcycle and RTD)
- Maps and Apps could be shared (Boston pursuing)

All pictures courtesy of godcgo.com
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


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
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

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.bromptondock.co.uk/
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**

**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
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/
• PBIC -- http://www.bicyclinginfo.org/promote/bikeshare.cfm
• CUTR -- http://www.cutr.usf.edu/index.shtml