BIKE TRANSIT INTEGRATION IN NORTH AMERICA

John Pucher & Ralph Buehler
Bicycling and Public Transport: Perfect Together?

**Synergies:**
- Cycling extends catchment areas of transit stops far beyond walking range
- Much cheaper than park and ride for cars
- Transit complements cycling by overcoming long distances, physical barriers, bad weather

**Rivalries and conflicts:**
- Limited space on crowded peak hour transit vehicles
- Cycling substitutes for public transport over short distances

**Most studies find mutually beneficial overall, but much more research needed**
# Share of Workers Commuting by Bicycle in US and Canadian Cities and Metropolitan Areas, 2006/2007

<table>
<thead>
<tr>
<th>City</th>
<th>MSA</th>
<th>Percent of Workers</th>
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<tbody>
<tr>
<td>New York City</td>
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<td>0.7</td>
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<td>Chicago</td>
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<td>Toronto</td>
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<td>San Francisco</td>
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<td>Vancouver</td>
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<td>Portland</td>
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Sources: U.S. Census Bureau (2008) and Statistics Canada (2008)

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Trend in Share of Workers Commuting by Bicycle in Large US Cities, 2000-2008

Sources: U.S. Census Bureau (2003-2009)
Types of Bike-Transit Integration

• Bike parking at rail stations and bus stops
• Multi-functional, full service bike stations
• Bike racks on buses
• Bikes on board vehicles, usually on rail vehicles, often with special provisions
• Bike paths, lanes, and on-street bike routes that lead to public transit stations and thus facilitate bike’s role as feeder to transit
Main form of bike-transit integration in Europe for decades
Bike racks and lockers at Metrorail Station in Virginia

Photo: Paul DeMaio
Indoor bike parking in Chicago

Photo: Chicago Transit Authority
Including vertical racks to save space
Electronic bike lockers at North Berkeley BART station

smart card used to access lockers
Bike parking at bus stops in Europe
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Bike station at Berkeley BART station
Bike Station in Millennium Park, Chicago

Just above terminal station of two commuter rail lines

Photo: Chicagoland Bicycling Coalition
New Bike Station in Washington, D.C.

Photo: Ralph Buehler
Bike Station in Muenster, Germany

Photo: Peter Berkeley
Bike Wash at Muenster Bike Station

Photo: Peter Berkeley
Easy bike rentals at transit stations

“ÖV Fiets” and “Call A Bike” in Germany and Netherlands
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Trend in Percentage of Buses with Exterior Bicycle Racks in the USA, 2001-2008

(Source: APTA, Public Transportation Factbook 2008, Table 23)
Over 50,000 buses in the USA now come equipped with bike racks
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Bike on LRT in NJ and Minneapolis

Photo: John Boyle

Photo: Metro Transit
Bikes on SkyTrain in Vancouver

Photo: TransLink
Bikes permitted on-board except during peak hours, and without special provisions for bike storage such as on CalTrain
Bike on Suburban Rail in NJ

Photo: Leigh Ann Von Hagen
Bikes on Caltrain in San Francisco

Photo: San Francisco Bicycling Coalition
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<th>Bike Parking at Transit Stops and Stations</th>
<th>Bike Racks on Buses</th>
<th>Bikes on Trains</th>
<th>Bike Routes and Transit Stops</th>
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Growth in Bike-Transit Trips

• Washington Metrorail: 60% growth in bike and ride from 2002 to 2007
• Minneapolis: doubling in bikes on buses from 2007 to 2008
• SF Bay Area: Bike access trips to BART stations rose from 2.5% in 1998 to 3.5% in 2008 (10,920 trips per day)
• More research needed on impacts of bike-transit integration
Conclusions

• Vast improvement in bike transit integration in North America since 2000
• Future growth in cycling will require even further investments in the coming years
• Bike and ride is much cheaper than park and ride and more environmentally friendly
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For more Details:  

THANK YOU