ITSP Study Mission:
Sustainable Public Transportation--
Environmentally Friendly Mobility

India and China – April 2011

APTA
Sustainability & Public Transportation Workshop
August 1, 2011
Mission Topic: Sustainability

- Environmental
- Social
- Economic
Cities Visited

- Ahmedabad
- Delhi
- Guangzhou
- Hangzhou
- Shanghai
General Context of Urban Development issues in India/China

- Rapid Economic Development
- Dramatic Urbanization
- Growth in Motor Vehicle Ownership
India - National Urban Transportation Policy

“Encourage greater use of public transport and non-motorized modes by offering Central financing assistance for this purpose”

“Bring about a more equitable allocation of road space with people, rather than vehicles, as its main focus”
Policy statement of Ministry of Construction on the Priority Development of Urban Public Transport - China

“Public transportation provides important and fundamental infrastructure . . . closely related to productivity and quality of life”

“Fully utilize public transportation’s high capacity, low cost advantage, and guide people to choose public transport as the main way to travel.”
Ahmedabad Janmarg BRT Features

- Broad chaotic ROWs reclaimed by city
- Simple center-island stations with manual ticketing
- Continued reliance on auto-rickshaw taxis as feeders
Ahmedabad Janmarg
Sustainability Innovations

- Partnership with CEPT University
- All CNG vehicles
- Socioeconomic accessibility
- Private oversight with competitive operators
Delhi MRT Features

- 130 miles operating – 90 more in next phase
- Accommodation of personal security scanning
- Local buses realigned as feeders
- Disciplined crowd-management
Delhi Sustainability Innovations

- DMRC earns carbon credits through UN protocol
- 20% of revenue is non-fare related
- Building/designing most new MRT systems in India
Guangzhou BRT Features

- Complete rebuild of primary east-west corridor
- Direct service model – 81 routes
- Triple platforms accommodate up to 9 vehicles
- Interoperable smartcards
Guangzhou BRT Sustainability Innovations

- Partnership with public research and design institution
- 7 competitive subcontracts serve 950 peak pullouts
- Integrated bikeshare facilities at stations
Guangzhou BRT
Hangzhou Bike Share and BRT Features

- World’s largest: 2400 stations, 60,000 bikes
- Free first hour, progressive hourly rate thereafter
- 40% of all trips are bus feeder
- Direct service BRT with dedicated bike lanes
Hangzhou Sustainability Innovations

- Bike control center handles all city customer services
- Stations managed through video/audio links
- Growing customer base for tourism & recreation
- Minimal theft due to pricing and availability
Hangzhou Bikeshare and BRT
Shanghai MRT Features

- 1st line opened 1995
- 300 miles – 250 more to be built by 2020
- 5.2 million daily linked trips – Load profiles displayed in real time
- Goal for urban core: transit access within 5-minute walk
- 4000 clean fuel buses by 2020, with 70% zero-emissions
Shanghai Sustainability Innovations

- 200 pure electric & supercapacitor buses in service
- Taxis considered part of public transit network
- Auto registrations distributed through auctions
- 50% transit mode share set as goal
Shanghai MRT and Buses
Sustainability Best Practices - Environmental

- Quantification and monetization of air quality improvements
- Leverage synergies with social and community development programs
- Attentiveness to treatment of last mile on transit
Sustainability Best Practices - Social

- Use of local academic and institutional technical expertise
- Supportive Federal Policy Framework
- Incremental approach to introducing amenities and selecting corridors
Sustainability Best Practices - Economic

- Competitive incentive-based joint operating/maintenance contracts
- Demonstration of local “green” industry products
- Creation of entrepreneurial enterprises within the public sphere
Questions?