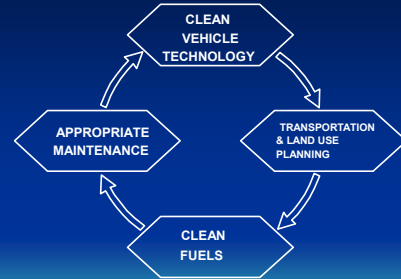


Alternative Approaches To Transportation A Tale of Two Cities

Michael P. Walsh
Jakarta, Indonesia
July 22, 2004



ELEMENTS OF A COMPREHENSIVE VEHICLE POLLUTION CONTROL STRATEGY



....increased congestion
everywhere!!



Bogotá



Population:	7.0m
Area:	492sq. km
Total vehicles:	800,000
Public Transport	56%
Cars/M'cycles	21%
Other (NMT)	23%

Bogotá

- Introduction of Bus Rapid Transit (BRT): "Transmilenio"
- Construction of almost 200 kilometers of bike paths
 - City administration is succeeding in dissuading citizens from using their cars by promoting commuting by bus and/or bicycle and using car pools.

Bogotá: Transmilenio Bus Rapid Transit



"Mayor Peñalosa decided in 1998 to reject a Master Plan that proposed to solve Bogotá's traffic jams with a metro system and elevated highways because it was unaffordable, promising mobility for the few, not mobility for all. The cost of one subway lane, could provide quality bus rapid transport to the whole city and have money left for sewage, schools and parks."

Bogotá: Transmilenio Results

- Within three years (by December 18, 2000)
 - the system was operational.
- Within ten months (by October 2001)
 - 540,000 trips per weekday
 - 23 miles of exclusive lanes
 - 54 stations
 - 364 articulated buses
 - 110 feeder buses
- Within 15 months (by March 2002)
 - 800,000 trips per weekday
 - 26 miles of exclusive lanes
 - 62 stations (including four terminals)
 - Peak direction passenger volumes have been reported at 45,000 with system speeds averaging 26 kilometers per hour overall.

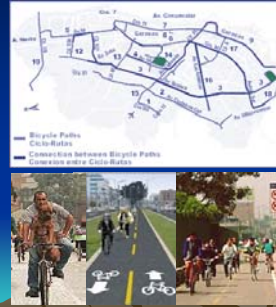
Bogotá: Transmilenio Management



Bogotá: Transmilenio Public Relations



Bogotá: 200 km bike path network



"With the money that Bogotá would have paid in one year of interest for a loan to build the metro, Mayor Peñalosa built 155 miles of bicycle paths that now move 5% of the population, up 10 times from bike ridership in 1998."



Bogotá

- Key ingredients for success
 - **Leadership:** Strong leadership, popular support and political commitment;
 - **Management:** The creation of a single agency (Transmilenio SA) with powers to plan, design, implement and regulate the new bus system
 - **Speed:** It is possible to develop a bus based, high capacity, and high quality mass transit system in a very short time.

Singapore



Population:	3.6m
Area:	647.5 sq. km
Total vehicles:	707,000
Public Transport	53%
Cars/M'cycles	25%
Other	22%

Singapore

- Comprehensive Approach
 - Road Infrastructure Investment
 - Public Transport Investment

Singapore

- Comprehensive Approach
 - Road Infrastructure Investment
 - Public Transport Investment
 - Traffic Management Actions



Singapore

- Comprehensive Approach
 - Road Infrastructure Investment
 - Public Transport Investment
 - Traffic Management Actions
 - Road User Charges
 - Car Ownership Fiscal Measures
 - Integrated Land Use Planning
 - Education / Public Relations



Singapore

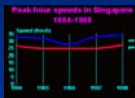
- Key ingredients for success
 - Effective Government and Comprehensive Management
 - Demand Management
 - Adequate and Sustained Investment
 - Technology and Innovation

Singapore: Key ingredients for success

- Effective Government and Comprehensive Management
 - Government Institutions
 - with the power, institutional capacity and mandate to regulate and enforce urban transport measures
 - A comprehensive transport planning and management system - the Land Transport Authority (LTA)
 - plans, develops, implements and manages transport infrastructure and policies including the regulation of public transport services (both bus and rail)
 - Singapore gets top ratings
 - for bus, MRT, LRT and taxi services in "convenience, accessibility, savings in travel time, reliability and comfort".

Singapore: Key ingredients for success

- Demand Management
 - Area Licensing (1972)
 - Reduced congestion
 - Increased public transit ridership
 - Reduced pollution
 - Reduced energy consumption
 - Electronic Road Pricing (1998)
 - 15% reduction in traffic
 - 22% increase in speed
 - Variable charges possible



Singapore: Key ingredients for success

- Adequate and Sustained Investment
 - Additional road infrastructure
 - Good maintenance of roads
 - Improving coordinated traffic lighting systems
 - Rail based MRT.
 - The taxes and fees imposed on vehicles generated huge financial resources
 - Annual revenue from road transportation is estimated to be at least 3-4 times road expenditure.

Singapore: Key ingredients for success

- Technology and Innovation
 - The ERP depends on sophisticated technology that allows time of day pricing reflecting traffic conditions.
 - Computerized traffic control systems were already in place by 1986 in the CBD.
 - Replaced with a traffic adaptive signal control system monitored centrally to adjust to changing traffic conditions.

Postscript

1. Car ownership is unavoidable but excessive car use is a problem not a solution to urban mobility.
2. Road space will always be limited, so priority must be given to moving people and goods not vehicles.
3. Public Transport is the best solution for the person trips.
4. Bus Rapid Transit is a quick solution to improving public transport and reducing congestion.
5. Travel Demand Management is an essential measure for reducing traffic congestion and improving the environment.
6. Non-motorized transportation must be enhanced and protected to achieve environmental sustainability within city neighborhoods and communities.
7. Developing a viable public transport system should not require sacrificing the time and accumulated wealth of an entire generation.
8. It is not necessary to destroy the city's identity in order to reduce traffic congestion.
9. All transportation solutions must be equitable to the city's residents.
10. Sustainable transportation development is always better than the vicious circle taken by many cities of trying to accommodate the private car by building more and more increasingly costly road space.