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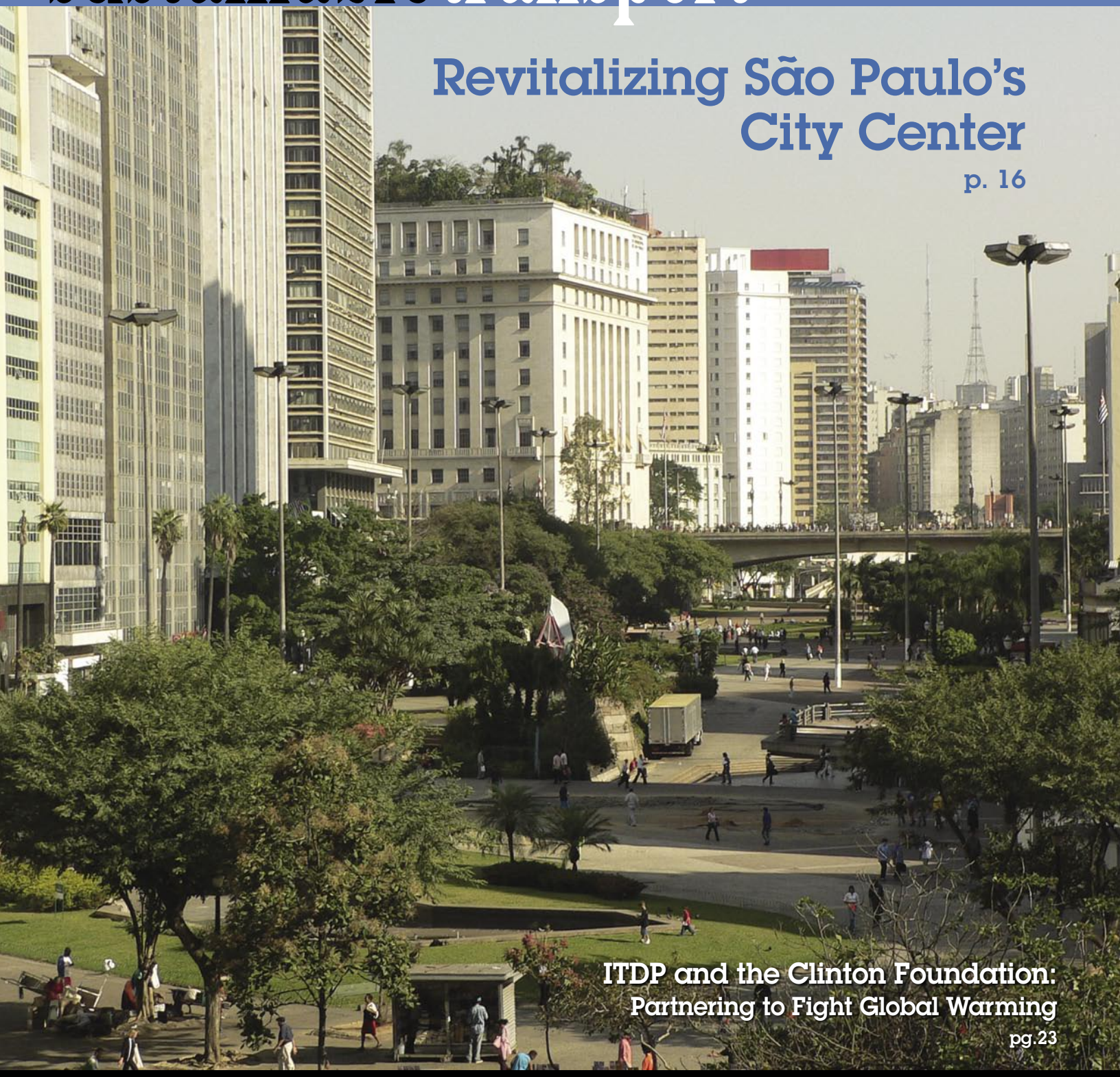

Revitalizing São Paulo's City Center

p. 16

ITDP and the Clinton Foundation: Partnering to Fight Global Warming

pg.23

India A-Buzz with Plans for Bus Rapid Transit

pg. 14

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contents

Fall 2006 Number 18

3 Discovering Magic in the Cities of Tomorrow

5 The Bicycle: Ready for Rollout in Brazil

8 Now "Made in China": Bus Rapid Transit

12 South Africa's Legacy or Lost Opportunity?: The 2010 World Cup and Beyond

14 The BRT Buzz in India

16 City Center Revitalization: Tapping São Paulo's Global Potential

21 TransJakarta: Taking Stock of the "Bus Wai"

23 ITDP and Clinton Foundation Join Forces

24 Understanding the Community Impact: Bicycles in sub-Saharan Africa

26 *Sustainable Voices:* Rail Interests Target Bogotá and Curitiba

28 New BRT Developments In Latin America

31 New Publications

31 Upcoming Events

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Anhangabau plaza, Sao Paulo
Source: Luc Nadal

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Letter From the Executive Director, Walter Hook

Discovering Magic in the Cities of Tomorrow

Ten years ago, inevitably, government officials around the world would tell us that constraining the automobile was unthinkable, that the people of (insert the name of any city here) are uniquely in love with their automobiles. Today, as more cities face severe degradation from explosive motor vehicle use, these comments are less frequent. But the time has come to move beyond merely 'protecting' and 'defending' the urban environment: it is time to take the political offensive and help cities create a little bit of magic.

Some of the world's greatest minds have turned their creative energy to designing beautiful buildings. The most famous architects are household names. People come to New York from all over the world to admire the beauty and grandeur of the Chrysler Building, the Empire State Building, and the Guggenheim. Perhaps one day, even the hole in Lower Manhattan left by the attacks on 9/11 will also have beautiful buildings in it.

Sadly, all of this creative genius usually stops short at the edge of the building. As soon as one walks out onto city sidewalks and streets, public space is in the hands of engineers who have no background at all in aesthetics, and who care more about maximizing traffic flow and fixing pot holes than about creating vital and enjoyable environments. If there are sidewalks at all, they are drab grey and covered with chewing gum. Double- and triple-parked vehicles consume public space like an occupying army, our senses assaulted by blaring horns, car alarms, street hawkers, and tailpipe emissions. Private buildings that are triumphs of design and aesthetic appeal open onto public streets that are a tragedy of the commons.

When cities have gotten it right, as with New York's Hudson River Greenway and bikeway, design control was taken away from the highway engineers and turned over to public private partnerships. In what used to be called "Hell's Kitchen", expensive new condominiums are being built, and their advertisements vividly promote proximity to the Greenway.

European cities are decades ahead of the rest of the world in applying the creative power of their best architects and urban designers not only to buildings but to creating vital, beautiful, human-scale streets and public spaces. In the new global economy, being able to attract and retain educated and talented young people will be the key to successful cities. In the cities of the future, talented and sophisticated people will demand culturally vital cities. Where cities have made investments into their cultural assets and public space, they have generally been repaid ten-fold.

Former Bogotá Mayor Enrique Peñalosa is fond of saying that we should be designing cities for our children; providing spaces where they can play and safe routes to schools and playgrounds. There is a profound truth in this. What kind of cities do our children dream of? Do our children dream of driving fast, fancy cars? Sure. But human desire does not stop at the mere mechanics of travel. My son reads *Harry Potter*, watches the *Lord of the Rings* movies over and over again, and would play the massive multiplayer online video game World of Warcraft all day long if we let him. He loves to go to so-called 'Renaissance' festivals. Okay, I love all these things, too. These fantasy worlds are places that share some common attributes. Every city in World of Warcraft, in the Lord of the Rings, and at the Renaissance festival, is *entirely pedestrianized*. With the exception of Ron's flying jalopy, cars and roads are strictly for muggles.

In the new global economy, being able to attract and retain educated and talented young people will be the key to successful cities.

These are the fantasies of people who by and large live in places where public space is degraded and dehumanized. The yearning is deep for a more natural, more human environment in our everyday life, not just far away in some Artic Wildlife Preserve that we will never visit. All of us want to save the pandas and whales because we have seen pictures of them in children's books, but when we walk and bicycle along the rivers and streams in our communities, when we actually *experience* these natural features of our environment, we demand that they be cleaned up. Getting people out from behind the windshields of their cars is not only important to reduce emissions, it's the way that people can connect with their environment, and care about it.

continued on p. 4

Letter From the Executive Director, Walter Hook

continued from p. 3

What do our kids want, what do we all want, from our cities? Do we want bike lanes, better sidewalks, bus lanes, and ethanol-powered vehicles? Sure. But deep down, where the emotions reside that motivate political action, these things are beside the point. What we really want is a little bit of magic in our everyday life.

As adults, of course, we don't believe in flying brooms, riding on tigers, or that we can get stabbed by swords over and over again and not get killed. New York City and other major cities are not Disneyland. We all have jobs to do, and we need to get to them.

But a great city needs some magic. Walking to work in New York is stimulating, but walking to work in Copenhagen or Rome is magical. Bicycling to work in Mexico City is good exercise, but bicycling to work in Bogotá or the Netherlands is magical. Riding on a busway in São Paulo gets you to the office a little bit faster, but riding on Bogotá's TransMilenio Bus Rapid Transit system is magical. Seeing the Taj Mahal in an electric bus won't damage the Taj, but seeing the Taj from a modern cycle rickshaw is magical. Any urban transport or public space project has to have a little bit of magic to inspire people and politicians.

Any urban transport or public space project has to have a little bit of magic to inspire people and politicians.

Thanks to generous support over the years, ITDP's influence has grown, and we now are invited to participate in more projects than we can handle. ITDP prioritizes the projects that can bring a little bit of magic.

In July and August, ITDP had the pleasure to launch our new City Center Revitalization Program with projects in São Paulo and Jakarta. Much of the historical heritage of São Paulo and Jakarta is being lost. Historical buildings, famous movie theatres and cafes, have been converted to parking garages, are covered with graffiti, and face abandonment and blight. Rivers can be particularly magical places, but São Paulo's rivers and Jakarta's canals are badly polluted, inaccessible, and frequently buried under asphalt. Allowing these cities to recover their historical heritage, their priceless cultural assets, and access to these waterfronts can create enchanting new places.

This is no simple task. It is not just a matter of urban design. In the real world, successful places are difficult to create. They require innovative transport solutions that liberate space for public enjoyment, brilliant urban design, and innovative forms of management and participation – not to mention political will.

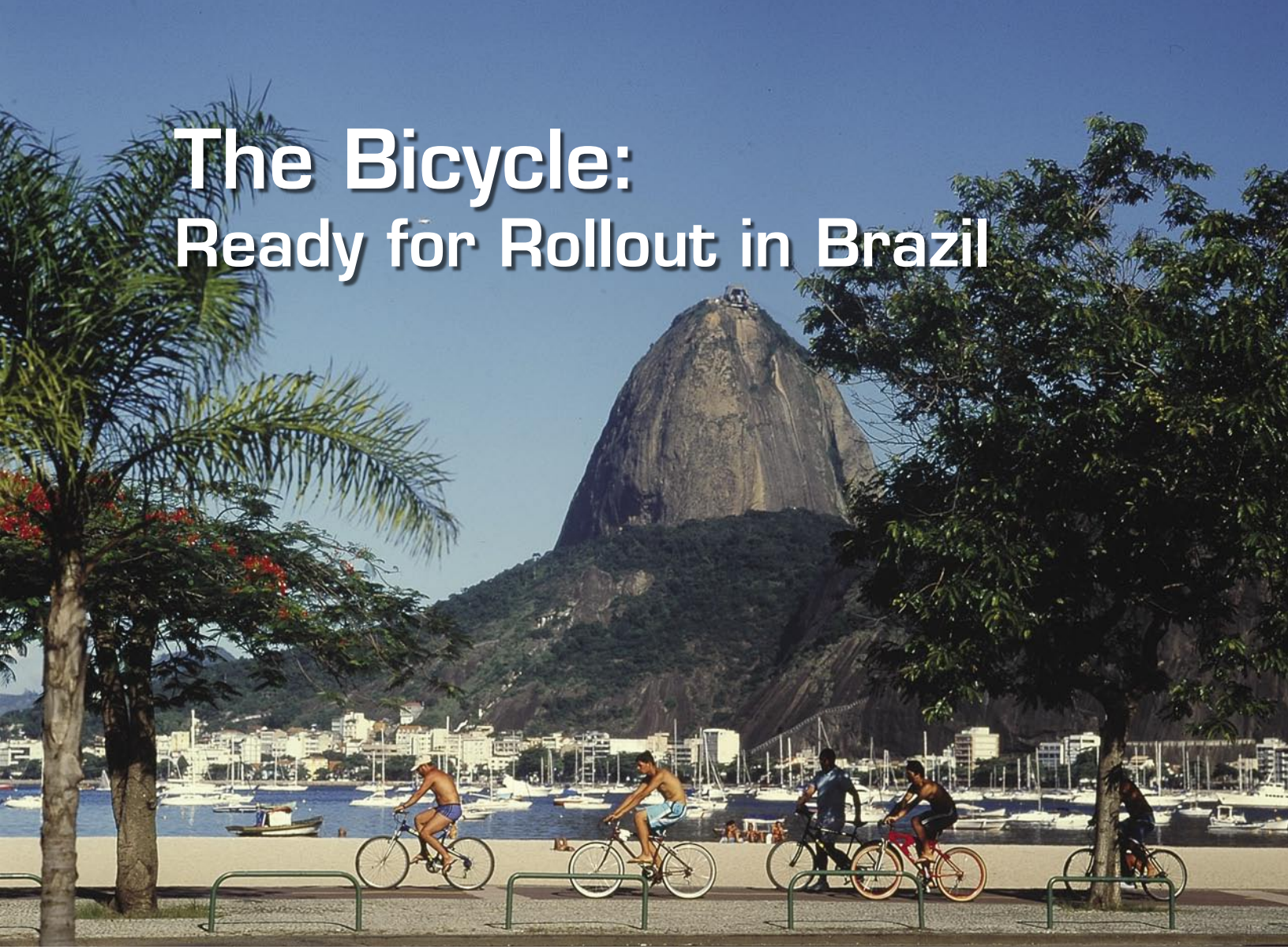
ITDP has the pleasure of partnering with Jan Gehl Associates of Denmark, the wizards that completely transformed Copenhagen into one of the most magical cities on earth. They are helping us work with talented local experts from the Municipality of São Paulo and the downtown partnership Viva o Centro, to reclaim São Paulo's priceless cultural heritage. We have been working in São Paulo with Tim Tomkins, the head of the Times Square Alliance, who helped transform Times Square into a safe and totally unique, quintessentially American place. ITDP brings its own extensive transportation expertise to these partnerships, to develop the mobility solutions that are compatible with this vision.

ITDP has been a partner to several other important breakthroughs this year. Bus Rapid Transit (BRT) continues to be a more powerful magic word than "abracadabra". The Mayor of Guangzhou has approved BRT on several corridors. Several South African cities are now moving quickly with feasibility studies for BRT in preparation for the upcoming World Cup in 2010. Jakarta's Governor has announced not only the rapid expansion of TransJakarta BRT system, but also congestion charging along the BRT corridors and a major pedestrian zone. In India, as part of the Nehru Urban Renewal Mission, India's national government approved financing in August for BRT projects in Pune, Jaipur, Indore, and Ahmedabad.

ITDP will also be working with the Clinton Foundation's Climate Initiative to help them set up their transportation programs in several cities. Our former President has seen the dangers of climate change and dwindling oil reserves, and has become a critical strategic partner. ITDP signed a formal Memorandum of Understanding with the Clinton Climate Initiative in August. ITDP continues to enjoy the support of the Hewlett Foundation for our new Bus Rapid Transit Planning Guide, as well as our work in Guangzhou, Mexico City and São Paulo. We continue to enjoy the support of the US Agency for International Development in Senegal, Ghana, and South Africa. We are fortunate in having the United Nations Environmental Programme – Global Environment Facility as a funder and partner for the BRT projects in Dar es Salaam, Tanzania and Cartagena, Colombia, and now for the Jakarta BRT and congestion charging project.

We are grateful to the support of the Blue Moon Fund for allowing us to continue our work in India and Indonesia now that US AID support there is finished, and it is to their support we owe the recent successes there. We have support from the World Bank for helping them prepare GEF projects in Latin America, and an excellent partnership along with GTZ and I-CE and the Brazilian Ministry of Cities on the training course for bicycle facilities design held in São Paulo in August. We would also like to thank Mark Gorton for his generous contribution to ITDP India to help them continue their excellent advocacy efforts there on behalf of cyclists and cycle rickshaw operators in the face of a recent Supreme Court ruling banning non-motorized vehicles in Old Delhi. ❖

The Bicycle:
Ready for Rollout in Brazil



by Jonas Hagen and Carlos F. Pardo, Sustainable Urban Transport Project

Similar to many other countries in the developing world, the use of cars and other private motorized vehicles in Brazil has increased dramatically in recent decades. Auto sales have more than doubled between 1990 and 2004, and motorcycle sales more than tripled in the same period. This has contributed to increasing congestion in cities and over 50,000 traffic-related deaths per year, or one death per 3,500 inhabitants – a rate five times higher than the one in Holland, a useful benchmark when it comes to comparing cities with bicycle friendly aspirations. In the face of these alarming statistics, many Brazilian cities have bold plans to encourage bicycling as a cleaner, safer mode of transport.

The presence of over 100 participants from 37 Brazilian cities at the International Workshop on Bikeways held from July 31 to August 3, 2006 demonstrated that the bicycle can be an important form of transport in Latin America's largest country. Held in Guarulhos, the event provided inspiration to neighboring São Paulo, one of the world's largest cities, where gridlock regularly lasts several hours each day.

The workshop was a joint effort between international organizations such as the World Bank, ITDP, the Interface for Cycling Expertise (I-ce), the German Technical Cooperation Agency (GTZ SUTP) and Brazilian authorities that included the Ministry of Cities and various municipal governments, and brought city planners and transport specialists together to share examples of successful bicycle infrastructure implementation throughout Brazil. Presentations ranged from small cities like Ubatuba to much larger cities like Rio de Janeiro.

Participants received training on planning bicycle infrastructure, went on a seven-kilometer bike ride, and sketched designs of bikeways on

continued on p. 6

Above: Rio de Janeiro has the second largest extension of bike paths in Latin America.

Source: César Duarte

The Bicycle: Ready for Rollout in Brazil

continued from p.5

maps. Groups worked enthusiastically on design projects and implemented the knowledge they learned throughout the course, creating plans for safe bikeways on streets that were formerly dedicated exclusively to cars. Brazil could start looking more like bicycle-friendly countries such as Holland or Germany if the workshop participants are able to implement their designs throughout the country.

According to a study by Brazil's National Association of Public Transport (ANTP) from 2000, the bicycle had an impressive 7.3% modal share for urban trips in Brazil (walking trips constituted 43.6%, public transport 28.9% and the automobile 19.1%). The recently created Brazilian Ministry of Cities seeks to increase modal share for cycling by making it safer and easier throughout the country.

"Our 'Bicicleta Brasil' program seeks to introduce new concepts for planning in our cities, where cyclists, pedestrians, and public transport are given priority, making it easier for people to reach their destinations, and at the same time democratizing public space and improving quality of life," said Augusto Valeri of the Ministry of Cities, speaking to workshop participants.

"The workshop has given me more arguments when the time comes to negotiate the implementation of bikeways in the city," said Laura Ceneviva, General Coordinator, Municipal Environmental Council.

A Tale of Two (Bike-Friendly) Cities

Ubatuba, a city of 79,000 on the coast of the state of São Paulo, has an estimated 80,000 bicycles, and according to Ronaldo Lopes, Director of Transit for Ubatuba, the bicycle is the most commonly used transport mode throughout the city. The municipal government instituted a "Bikeways Program" in an effort to reduce the number of accidents involving cyclists, which had averaged five per day, and strengthen connections between the 16.6 kilometers of existing bikeways.

The program includes the construction of 33 kilometers of bikeways, ranging from off-road facilities (*ciclo-vias*) to segregated, on-road facilities (*ciclo-faixas*), to striped bike lanes adjacent to car parking, as well as campaigns to promote cycle use and safety.

> **"The workshop has given me more arguments when the time comes to negotiate the implementation of bikeways in the city."**
>
> **– Laura Ceneviva, General Coordinator, Municipal Environmental Council**

"The main challenge was to change the paradigm from planning exclusively for cars to one that includes bicycles. We had to reconcile different political interests, and get our engineers to reorganize road space for bicycles," said Mr. Lopes.

The first phase of the program included two kilometers of bikeways and an educational campaign for children and adults on the proper use of the bikeways. Accidents have decreased by 40% in the area where the new bike lanes were implemented. In a documentary film designed to promote bicycle use, Eduardo Cesar, Ubatuba's mayor, said that although these bikeways were resisted by business owners at first, "Today people perceive that the bikeway is a reality and all departments of the municipal government and all of society support the bikeway because it is the only solution for the co-existence of pedestrians, cyclists and automobiles."

Ronaldo Lopes said the benefits are multiple: "People are beginning to realize that we are not only reducing accidents, but the bicycle also improves health, social relations and the environment. We are also looking at the bicycle's potential to integrate Ubatuba for regional tourism."

In 1994, Rio de Janeiro, a city of 5.8 million, had a bicycle modal share of

Source: Jonas Hagen

Workshop participants had the chance to work with international experts on bicycle facilities planning.

ASCOBIKE, a Refuge for Cyclists

To appear in Worldwatch Institute's "State of the World 2007: An Urban Planet", available January 2007.
www.worldwatch.org

The people of São Paulo go to great lengths to escape the city's gridlocked traffic, which produces 90% of the dense smog that veils the city from above. For the wealthy, a massive helicopter fleet rivaling that of New York City's transports commuters over traffic jams and slums. For others, a simpler, healthier alternative is growing in popularity – making São Paulo a city of bicycles.

In the São Paulo suburb of Mauá, a one-of-a-kind bicycle parking lot is becoming an oasis for cyclists. In Mauá's gritty pedestrian area near a train station, where popular Brazilian tunes blare from small shops selling juices and fried foods, the Association of Bicycle Riders, or ASCOBIKE, has carved out a refuge for residents who travel on two wheels.

"I save time and money using my bike," said Orlando Ribego Senna, a Mauá resident who rides the train to work in São Paulo. Senna used to spend a half an hour just getting to the train station. "With my bike, it takes me seven minutes to get to the station now," boasts Senna.

With a population of 10.9 million living within the city's limits, and 19 million people in the greater metropolitan region, São Paolo is the largest city in the Southern hemisphere and one of the five most populous in the world. Although the city government has recognized that increased cycling could benefit air quality, alleviate gridlock, reduce traffic deaths and injuries and create a more equitable city, a significant network of bike lanes has not yet appeared, and the city's cyclists are forced to brave aggressive and deadly traffic.

ASCOBIKE was created in 2001 by Adilson Alcantâra, then the station manager at the Mauá station, when he noticed the passageways around the station had become obstructed by cycles locked to railings and posts. The original 700 spaces filled quickly, and with 1,800 current members and new people signing up everyday, the association is looking to expand.

For a ten Real (about $US 5) monthly fee, ASCOBIKE members can park their bikes as well as receive regular maintenance. Members also have an area to change, wash up, and shine their shoes before getting on the train.

A typical day at the ASCOBIKE parking lot in Mauá – completely filled.

"People don't just park their bikes here, they hang out together, and on the weekend we have bike rides and barbecues," said Adilson. "No one values the bicycle [in São Paulo]; all of the road space is given to the car. Here we try to make the friendliest environment possible so that people feel good about using their bikes."

ASCOBIKE members can also save money. "The bike is also about 80% cheaper than the bus," said Orlando Senna. "I would pay 120 Reais (about $US 60) a month for the bus, and here I pay 10 Reais, giving me an extra 110 Reais per month." ❖

1.28%. Ten years later, this figure had more than doubled, reaching 3.24%. At 140 kilometers, Rio has the second-largest network of bikeways in Latin America.

"These days, the bicycle is one of the quickest and most fun ways to get around Rio de Janeiro, and thanks to the bikeways, it is safe, too," says João, a member of Transporte Ativo, one of the leading non-governmental organizations that promote the use of bicycles and other sustainable transport modes in Rio.

Claudia Tavares of the Municipal Government of Rio de Janeiro has said that increasing the modal share for bikes has been possible due to the construction of bikeways in Mané Garrincha, Copacabana, Orla de Ipanema and many other areas of this city since 2000. The development of Rio's extensive network has been accompanied by a pubic awareness campaign led by the local government, Transporte Ativo and the European Union URB-AL (an initiative for Latin American Cities) project "Movilization". These groups have worked together to produce many promotional materials as well as a full-colored publication called "Ciclovías Cariocas" (The Bikeways of Rio). They have also organized cultural events and developed videos to be shown to the general public.

continued on p. 30

Source: Eric Ferreira

Now "Made in China"
Bus Rapid Transit

By Xiaomei Duan, GMTDC and Karl Fjellstrom, ITDP

Bus Rapid Transit (BRT), pioneered in Curitiba in the 1970s and for the first time seen as a genuine high capacity mass transit alternative to rail-based options after the implementation of Bogotá's TransMilenio in 2000, is rapidly coming of age in Asia. In 2006 China underwent a sea change, shifting from BRT planning and promotion to BRT implementation. Major developments are occurring in cities that include Beijing, Hangzhou, Guangzhou, Shenzhen, Shenyang, Chongqing, Xi'an, Jinan and Kunming. Practically all of these cities are planning or implementing systems with features that include larger buses operating on exclusive lanes, level boarding and alighting, pre-board fare collection, real-time travel information, and signal priority at intersections. This article summarizes current BRT developments in cities around China and briefly reviews the performance of the systems that have already been implemented.

Beijing

When it first opened in December 2004, the Beijing BRT was only 5.5 kilometers long and carried just 1,000 passengers daily during its first year. The expensive fleet of BRT buses largely languished in the depot. However, after expanding the first corridor to 16.5 kilometers and canceling several competing bus lines in December 2005 the situation has greatly improved.

Source: Karl Fjellstrom

A Beijing BRT station

Field surveys in March 2006 revealed a daily passenger boarding volume of around 80,000 passengers and peak passenger flows of around 5,000 passengers per hour per direction. Although this peak ridership was substantially lower than predicted, the BRT fleet of 44 articulated buses was insufficient to meet demand, and some regular buses were brought into the BRT corridors and stations to alleviate peak period overcrowding. Around one third of peak period passenger demand was carried using non-BRT buses operating within the BRT infrastructure – a dangerous and unpleasant situation for passengers.

On May 1st, however, 21 new BRT buses commenced operation, bringing the total number of BRT buses to 65 and further boosting passenger demand. The new

diesel buses from Jinhua Neoplan are more appropriately designed and cheaper than the original fleet of CNG BRT buses produced by an Iveco joint venture, which had several mechanical and design problems.

The passenger waiting time at congested stations in the evening peak in late March typically exceeded 15 minutes and was up to half an hour. Although these waiting times have been reduced with the deployment of additional BRT buses, station design shortcomings will begin to erode operational speeds as bus frequencies and passenger demand increase.

The peak period, peak direction operational speed is currently around 22 kilometers per hour, slightly faster than the speed of regular buses in the same corridor. The corridor is not currently congested (apart from the northern section, which does not have segregated bus lanes, and some queuing delays at a few intersections), but congestion can be expected to increase in future, leading to more significant travel time savings for BRT passengers compared to regular buses.

The second Beijing BRT line, extending from the Chaoyangmen central business district area and westward along Chaoyang Rd to Dingfuzhuang, has already been identified and as with the first BRT line is excellently placed to capture significant passenger demand. Station locations are currently being discussed. A third BRT line to the north of the city centre will serve the Olympic Park area. By the 2008 Olympics 100 kilometers of BRT are expected to be in operation. Ten BRT lines are planned for implementation by 2010.

Hangzhou (Zhejiang)

Hangzhou's BRT, 27.2 kilometers from the city centre extending eastward to a new university area and industrial park, commenced operation in late April 2006 with a fleet of 50 semi-low floor articulated buses. Stations are located on a median adjacent to the impressive bicycle lanes along the corridor. The eastern portion of the corridor currently has no congestion and little traffic or public transport demand, but is expected to rapidly develop. The inner western portion is adversely affected by congestion at some points where the busway enters mixed traffic, but the low passenger volumes, large station spacing and uncongested eastern two-thirds of the corridor helps ensure high operational speeds of up to 28 kilometers per hour even in peak periods.

As in Beijing, the government has effectively assumed the demand risk, with no expectation for the first corridors to be profitable. Roughly half of the implementation budget was spent on the purchase of buses. As in Beijing, the state-owned, near-monopoly city bus operator is responsible for operating the buses. The fare is 4 yuan regardless of distance, which is high by Chinese standards, but as in Beijing holders of public transport smart cards – nearly all regular users of the system – are entitled to various levels of discounts.

Hangzhou's impressive BRT buses operate at frequencies of two to three minutes during peak periods. The attractively designed stations are very far apart; 1.8 kilometers on average. The low passenger demand has resulted in pressure on regulators to allow other bus routes to use the BRT lanes in the congested inner city portion of the corridor.

Xi'an (Shanxi)

In late July the Xi'an city government announced the commencement of construction of a 4.5 kilometers first phase BRT line crossing the historic walled city area from east to west and due to be completed by the end of the year. The entire first corridor is 18 kilometers long from Chengxi to Fangzhi Cheng, and is to be completed in three phases by the end of 2008. As in several other cities, the Xi'an BRT construction is being done together with the reconstruction of an existing roadway. The new road will be 50 meters wide, with eight lanes in two directions, two BRT-only lanes, and the current bicycle lane relegated to the walkway.

The first phase has seven stations, with passenger access via new or existing footbridges. Buses will be either articulated or bi-articulated.

continued on p. 10

Source: Karl Fjellstrom

Hangzhou's BRT stations and buses. The corridor has high volumes of cyclists and at some points the BRT buses enter mixed traffic.

Made in China

continued from p.9

Shenzhen (Guangdong)

Shenzhen's BRT corridor, developed by the Planning Bureau and intended as the first of five corridors by 2010, was approved in late May. The first corridor, 24 kilometers from Laojie to Xili via Sungang Road, is expected to start construction by early next year and be operational later in 2007. It will be a 'closed' system (buses operating only inside the BRT corridor), with 28 stations featuring pre-board fare collection and level boarding and alighting on 40 BRT buses. The first corridor will have three terminals: Laojie, Xili and Honey Lake.

Jinan (Shandong)

A team from the China Academy of Urban Planning and Design, together with Tongji University and the Jinan Municipal Design and Research Institute, with outside technical assistance from the Energy Foundation and Logit from Brazil, has prepared the plans for a 13-kilometer BRT corridor in Jinan, the city's first. Construction commenced in late April in conjunction with a new viaduct that will run above the BRT corridor, and is due to be completed by September 2007. The city plans to invest 20 billion yuan to build more than 100 kilometers of BRT lines over the next five years.

The BRT buses will be 18 meters long, with multiple doors and low floors. The median aligned BRT stations (under the viaduct) are 6.5m wide, closed, and with seats for waiting passengers. There are 20 BRT stations with the distance between stations a more reasonable – compared to many of the other cities – 608 meters. Passengers access the stations at street level, with space kept for possible future footbridges. There are four transfer stations along the first line. As with the other cities, smart cards are the main method of fare payment.

Shenyang (Liaoning)

Shenyang has been working on BRT planning since at least 2003, and early this year announced plans for two east-west and two north-south BRT corridors. These BRT corridors are all parallel to but set back a reasonable distance from two planned metro lines. The first identified BRT line is 16 kilometers from north to south through Wahua Rd – Guangyi Rd – Xishuncheng Rd – Wu Ai Rd and currently has 30 bus routes and very high public transport demand. The average station spacing is 1 kilometer.

Chongqing

The Chongqing General Bus Company formed a BRT development company in September 2005 to work on the city's BRT planning. In early July 2006 the Chongqing Bus Rapid Development Company signed an MOU with ETC, a German traffic consulting company, for pilot corridor technical support. Chongqing is also exploring the possibility of manufacturing its own BRT vehicles. The current planning involves articulated 18 meter BRT buses on exclusive median lanes with a total length of 45 kilometers from the Yubei Airport area in the north to Banan District in the south. The average station spacing is 1.5kilometers.

Kunming (Yunnan)

With its median bus lanes in 1999, Kunming was a pioneering city in Asia. Unfortunately, since that time Kunming has fallen behind, and capacity limitations arising from station, bus and fare collection system design resulted in degradation of the busway performance as demand approached 8,000 passengers per hour per direction.

Kunming currently has 40 kilometers of exclusive median bus lanes in six corridors. A new type of busway commenced construction in July as a five-kilometer, northern extension of the current Beijing Rd busway, and is due to be completed by October. Departures from the earlier design include better bicycle integration at stations; banning of left turns along the corridor; stations located before rather than after intersections; more lanes for mixed traffic (widened road); and a one meter-high dividing fence to keep cars and pedestrians out of the bus lanes.

Unfortunately, with the exception of the banning of left turns, these proposed changes do not address the main limitations on Kunming's busway capacity; namely the on-board fare collection, non-level boarding and alighting, bus door entry and exit restrictions, relatively small bus size and lack of overtaking lanes at stations.

Guangzhou (Guangdong)

China's and Asia's highest capacity and potentially most spectacular BRT system is currently under development in the booming southern metropolis of Guangzhou. While the existing and planned BRT and busway systems in China and Asia are all medium to low capacity, Guangzhou's BRT would rival Bogotá's TransMilenio as the world's highest capacity BRT system, with peak passenger demand of more than 25,000 passengers per hour per direction. Well over half a million passenger trips each day will use the 18.7-kilometer Zhongshan Avenue portion of the first corridor alone. Guangzhou's BRT stations and operational model have been designed to accommodate the huge demand levels in the city's main corridors. And unlike many of the other cities, Guangzhou's system has been designed from the beginning to be financially viable, with the expectation that the operators will pay for the BRT vehicles instead of the government.

While Guangzhou is in advanced planning and preparation for implementation, the city's BRT project has not yet been formally announced, and key details of the implementation – which will determine the ability of the system to meet the performance levels described above – are still being finalized.

Other Cities

Xiamen (Fujian) in early August officially abandoned long-cherished light rail plans in favor of Bus Rapid Transit. The BRT planning is to commence soon, with a similar alignment to that proposed earlier for the light rail. Shanghai has been discussing BRT for many years and is currently preparing plans for BRT on the second ring road, to be opened before the World Expo in 2010. Chengdu (Sichuan) has also had detailed BRT plans in various corridors since 2003, but a formal decision has not yet been made to implement a system there. Wuhan (Hubei) commenced BRT planning in 2006, with planners identifying three preferred corridors with a total length of 27kilometers. Wuhan approaches Guangzhou in terms of potential passenger volumes, with a mode share of 26% of trips by bus and a fleet of nearly 6,000 buses.

The current speed of BRT development in China is without historical parallel. The quality and performance of these new systems will depend ultimately upon the planning teams in the individual cities, and their ability to avoid repeating mistakes made in BRT planning elsewhere. By 2010 China is projected to have 50 cities with a population of more than 2 million inhabitants, the vast majority of which will rely on bus rather than rail-based mass transit systems. The policy path chosen by these cities will be shaped to a large extent by the examples set by the pioneering cities described above. ❖

The Guangzhou Municipal Technology Development Corp. (GMTDC) is a traffic and transportation planning and engineering company owned by the Construction Commission's Municipal Design and Research Institute. ITDP and GMTDC jointly conducted the Guangzhou BRT planning together with the Traffic Improvement Leading Group Office.

Source: ITDP

Left: Rendering of a Guangzhou BRT station.

South Africa's Legacy or Lost Opportunity?

The 2010 World Cup and Beyond

Article and photos by Lloyd Wright, Viva

Source: Lloyd Wright

Existing walking and public transport conditions in South African cities have created hardships for much of the population. The 2010 World Cup represents a unique opportunity to transform the nation's urban transport sector.

South Africa's renaissance will reach a milestone with the hosting of the 2010 World Cup. The event represents a rare opportunity for significant transport investment that can leave a lasting legacy to an entire nation. However, special events, such as the World Cup or the Olympics, can also absorb precious capital in a one-off manner and only exacerbate investment shortfalls in critical areas such as education, healthcare, and urban infrastructure. Whether South Africa scores a "golden goal" or an "own goal" with the 2010 World Cup will likely be determined by planning decisions made in the next few months.

To move the thousands of local fans and international visitors between airports, hotels, and sporting venues is a daunting logistical challenge. The existing supply of municipal bus, minibus taxi, and metro rail services is seen as being well short of the required quality for a marquee international event. Given that most World Cup infrastructure must be completed by 2009, any new urban transport options must be delivered quickly and within a rational budget.

As a result, Bus Rapid Transit (BRT) and non-motorized transport (NMT) like bicycling and walking are being given serious consideration as mobility options for 2010. BRT has a record of delivering several complementary objectives simultaneously. It can provide a level of transit quality that is comparable to a metro rail system, but within a more acceptable cost (US$ 2 million to 7 million per kilometer), and the first phase can typically be delivered within a two-year period. Additionally, BRT can help to "professionalize" existing transport operators and lead to profitable, subsidy-free service for all. The professionalization of transit services implies helping current informal operators to transform into formal entities capable of offering a higher-quality product. The successes achieved to date in such cities as Bogotá, Colombia; Brisbane, Australia; Curitiba, Brazil; Guayaquil, Ecuador; and Jakarta, Indonesia all speak to this potential in South Africa.

By comparison to South Africa's other large mass transit initiative, the Gautrain, BRT is far ahead in terms of cost-effectiveness and overall network delivery. The Gautrain is a regional rail initiative that will link the cities of Tshwane (Pretoria) to Johannesburg as well to the Johannesburg International Airport. Project costs have already ballooned from R 7 billion (US$ 1 billion) to over R 22 billion (US$ 3.1 billion), an amount greater than what the entire country has ever annually invested in transport. Initial demand projections also suggest that long-term operational subsidies are likely. While the link between cities provided by the Gautrain is clearly beneficial, this unprecedented investment could be better applied to building badly needed transit systems within the city. In fact, the same investment that is creating 80 kilometers of Gautrain would deliver approximately 1,400 kilometers of high-quality BRT. An investment in BRT of this size would provide full urban transport networks for five of South Africa's largest municipalities, including Johannesburg, Tshwane (Pretoria), eThekwini (Durban), Nelson Mandela Bay (Port Elizabeth), and Cape Town.

The National Department of Transport (NDoT), in conjunction with local partners such as the CSIR, has embarked upon an effort to raise public awareness about BRT throughout the county. During July 2006, NDoT and CSIR hosted a series of workshops, including a workshop at the South African Transport Conference and training sessions with the municipalities of Cape Town, Johannesburg, Tshwane, and eThekwini. Initial BRT plans have already been generated for Cape Town and Nelson Mandela Bay. The national government is also backing this up with financial assistance through its Public Transport Investment Fund (PTIF). To date R 3.7 billion (US$ 529 million) has been allocated to the PTIF, and it is quite possible that this amount will be increased. Ibrahim Seedat of the NDoT's Public Transport Strategy Division urges cities that apply for funding "to give much consideration to developing plans for high-quality, full BRT systems that are also well-integrated with non-motorized options and measures to restrain car use." Proposals that include a complementary package of sustainable transport measures like these will have an advantage in gaining PTIF funding.

Source: Lloyd Wright

Above: The success of BRT systems in cities such as Guayaquil (left photo) and Bogotá (right photo) has done much to spur interest elsewhere.

NDoT's awareness efforts have already paid dividends in terms of spurring serious attention to the potential of BRT. The City of Johannesburg and the Province of KwaZulu Natal have sent political and technical teams for study tour visits to BRT sites such as Bogotá, Curitiba, and Guayaquil. Johannesburg and cities in KwaZulu Natal are undergoing evaluation processes to determine the applicability of BRT in their own local conditions.

Beyond public transport, non-motorized options represent the most effective means to rapidly and cost-effectively move thousands of football enthusiasts around venue sites. Upgrades to public space also bring the added ability to transform cities and improve long-term conditions for all. Besides the stadium facilities, South Africa will provide "Fanfest" areas in which local and international guests can socialize and watch games on big-screen displays. Fanfest areas can thus become a precursor to efforts to permanently pedestrianize public spaces as well as to

continued on p. 29

The BRT Buzz in India

Indian cities are leveraging national support and private sector partnerships to plan Bus Rapid Transit systems that can address their mobility needs.

by Shreya Gadepalli, ITDP India

These days, it seems that Indian cities are buzzing with the phrase "Bus Rapid Transit" (BRT). Almost every small and medium sized city (e.g., with populations between two and five million) wants to have one. The credit for bringing BRT fully into India's national discussion on urban transport goes, to a large extent, to the Ministry of Urban Development (MoUD), which organized a national conference in March 2006 on Mass Transit Technology Options with special emphasis on BRT.

"High-cost Metro is not the answer to the future of cities whose population is expected to double in the next 25 years," said Mr. S. Jaipal Reddy, India's Minister of Urban Development, in his inaugural address at the conference.

Before taking center stage at the MoUD conference, the concept of BRT had been introduced through several projects that have been underway in India for some time. The initial effort was led by the Transport Research and Injury Prevention Program (TRIPP) at the Indian Institute of Technology, Delhi (IITD) nearly a decade back. What first started as a bicycle network master plan for the city of Delhi grew into a High Capacity Bus System (HCBS), which was rechristened as an open BRT system by TRIPP. TRIPP was appointed by the Delhi State Government in 2001 as a consultant to develop HCBS in Delhi. Construction of road infrastructure on a 15-kilometer pilot corridor has not yet commenced but is expected to start soon.

In the meantime, other cities are spearheading the development of BRT with their own programs, some starting as recently as May 2006. MoUD has authorized grants for Ahmedabad (US$ 6.6 million for a pilot corridor of 12 kilometers), Indore (US$ 10.9 million for a pilot corridor of 11.4 kilometers) and Pune (US$ 6.9 million for a pilot corridor of 13.2 kilometers). The average cost for BRT infrastructure is expected to be US$ 1.6-1.8 million per kilometer, excluding rolling stock. A fourth city, Jaipur, has been given grant approval pending the completion of its BRT plan. These grants come under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) of the Government of India. The funding is only partial and part of the investment is expected to come from private institutions through public private partnerships (PPPs).

Most Indian cities, save for a few large ones, do not have a strong public transport system, the result of several factors that are shaping the urban transport paradigm in India today. Though household incomes have increased, the modal share for public transit and bicycles has deteriorated. An undersupply of capacity in the existing bus system and the lack of reliable public transport have encouraged the use of private vehicles, mainly motorized two-wheelers. (The marginal cost of operation for motorized two-wheelers, excluding the cost of vehicle, is similar to bus fare.) The ownership of cars, though still small in second tier cities, is increasing at an alarming rate and stands to make the severe

Above: Rendering of Ahmedabad intersection with its planned Bus Rapid Transit system. The planned network of segregated BRT corridors, most of which would also have protected bicycle lanes, stands at nearly 90 kilometers.

Source: CEPT University, Ahmedabad

pollution and congestion in many Indian cities even worse.

Government-owned bus systems in cities like Ahmedabad, which used to be more robust, deteriorated over time as a result of neglect and came close to shutting down. Lack of investment in new rolling stock and the resulting low productivity due to high staff-to-bus ratios were the principal cause of this near disaster. Other cities like Indore and Jaipur did not have an organized bus system at all, and the only public transport available in these cities were para-transit modes like small and large three-wheelers (baby taxis) or minibuses that operate on specific routes for a specific fare. Public transit's share of all passenger transportation is under 30% in these cities, including the para-transit services.

City governments in India have realized the need to take a proactive role in building strong public transport networks that can improve the livability of their cities. In Latin American cities, where the public transit mode share was already high, bus operations were restructured and consolidated through the Bus Rapid Transit system. In contrast, the goal for Indian cities is to use BRT as the cornerstone of a high-quality system that stimulates an increase in public transit ridership. Recent evidence suggests that significant latent demand for reliable public transportation services can be tapped using safe and reliable modes such as Bus Rapid Transit and that mechanisms like PPPs can be utilized to make them cost-effective.

In Ahmedabad, for example, the municipal govern ment's creation of a PPP has led to the doubling of the city's bus fleet, which now serves 800,000 passenger trips per day, up from 300,000 trips a day in early 2005. Under this partnership, rolling stock is bought by private firms who run bus operations under the Ahmedabad Municipal Transport Service (AMTS) according to a per-kilometer, fixed rate contract. Revenue collection is done by AMTS through its own staff. This new arrangement has also lowered the financial burden on the municipality by almost 50%.

The BRT system being planned in Ahmedabad aims to change the entire urban landscape by incorporating other elements like bicycle lanes and parking facilities; wide pedestrian sidewalks; on-street restrooms and drinking fountains; parks; and organized vending spaces. The planned network of segregated BRT corridors, most of which would also have protected bicycle lanes, stands at nearly 90 kilometers. Of this, a pilot corridor of 12 kilometers is being implemented under a MoUD grant in the fast developing, middle class area in western Ahmedabad.

Indore, where organized bus operations did not exist previously, came up with its own PPP model in which private operators bring in rolling stock while bus operations are carried out by staff employed by the Indore City Transport Service Limited (ICTSL), a special purpose entity (SPV) owned by administrative agencies of the city. A fleet of 50 high quality, low-floor buses run on 18 routes and its size is expected to go up to 100 by the end of 2006. A larger fleet of the same type of buses is expected to form part of the BRT system, the institutional structure and business plan for which is basically in place using an approach like the ICTSL. The SPV, as well as the private investors who have brought in the rolling stock, are already making a profit, which demonstrates that a well managed, bus-based transit system can work without perpetual subsidies. Non-fare box sources like advertising are also being leveraged to add to the revenue. Variations of PPP models like those in Ahmedabad and Indore are now seen as the basis for BRT operations in all Indian cities.

City governments like Pune's have realized the need to reduce pollution and traffic congestion, and are taking a proactive role in building strong public transport networks.

Ahmedabad, Indore and Pune are looking at a "hybrid" BRT system that would utilize new, high quality, 12-meter, low-floor or semi-low-floor buses that run both on and off segregated corridors. A hybrid BRT system removes the need for transfers, which makes it passenger-friendly, and fully utilizes the flexible nature of bus technology. It also provides passengers access to the BRT network even if they do not stay close to the segregated corridor network.

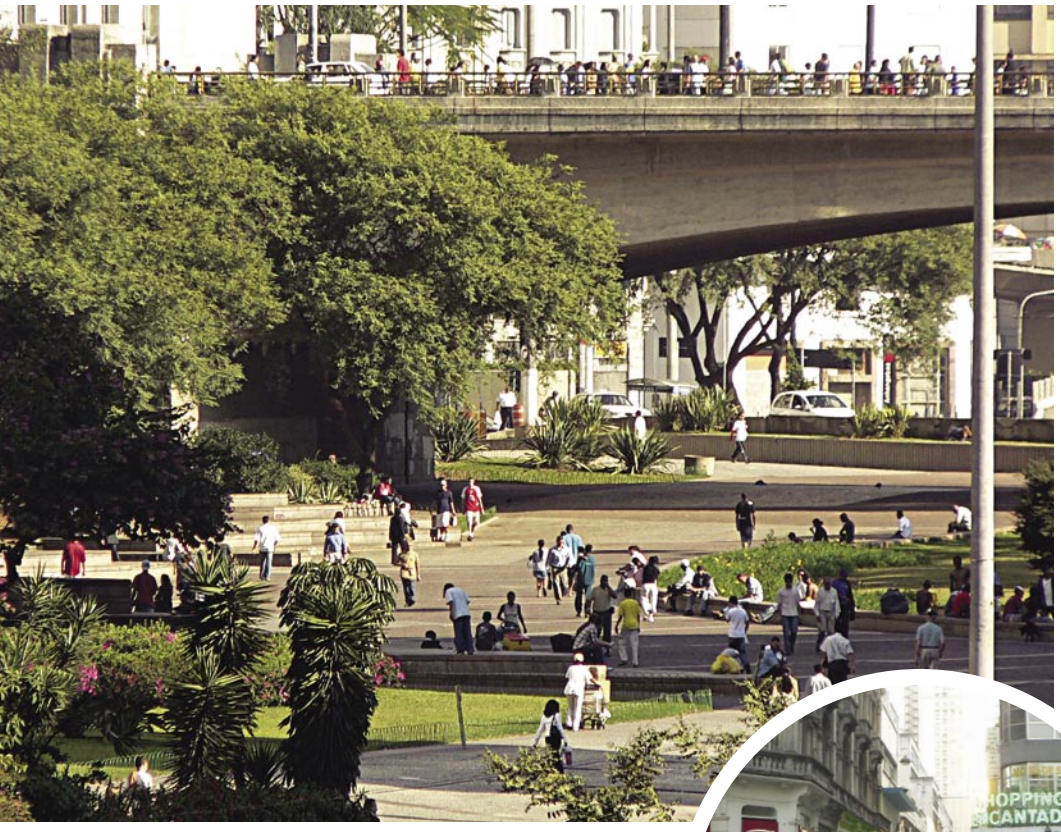
The Ministry of Urban Development is closely monitoring the projects through regular workshops and reporting requirements to make sure that grants are not used just for road infrastructure improvement, but rather to develop world-class BRT systems in these cities. The BRT "buzz" continues and all eyes will be on Ahmedabad, Indore and Pune in 2008 when full BRT operations are expected to start. ❖

Sources: Pune Municipal Corporation; Bottom

City Center Revitalization:
Tapping São Paulo's Global Potential

In a contemporary urban world largely given to generic sprawl, well-restored and enhanced historic centers provide a unique sense of place that's irresistible to the global economy's movers and shakers.

Article and photos by Luc Nadal, ITDP



Above: The Anhangabau plaza has the potential to become the Champs Elysees or the Piazza Navona of São Paulo – a place of identification for the entire city where people can celebrate and connect with the spirit of the city. Right: Pedestrian area in the Sé District

Source: Luc Nadal

One morning in late July, some 400 *paulistas* – residents of São Paulo, Brazil – eagerly gathered in a large conference room at City Hall to discuss the reversal of a half-century of residential and employment decline in the city's historic center. They had come out to listen to a group of city leaders and international speakers, among whom stood the Mayor of São Paulo's Sé sub prefecture, the head of the city's planning corporation, and the director of Viva o Centro, an influential, private non-profit group dedicated to revitalizing the downtown area.

Also speaking were three wonder-makers of city life that ITDP had brought in from three continents: Enrique Peñalosa, the former Mayor of Bogotá, Colombia, who transformed his city with world-class mass transit, extensive bicycle facilities, and wonderful public spaces reclaimed from traffic; Tim Tompkins, the president of the business improvement district that helped bring New York's Times Square back into one of the most popular places in the U.S.; and David Sim, a senior associate of Jan Gehl, the architect and scholar who in the last 40 years has been instrumental in devising the methods that have made Copenhagen one of the most livable cities on Earth.

In bringing all these people together, ITDP was making a decisive move towards expanding its mission. After two decades of work focused largely on sustainable transportation, the Institute was now taking on city center revitalization. Rising living standards and the spread of automobile ownership in emerging economies have often resulted in the flight of the middle classes to car-oriented, and indeed car-dependent, living and working environments – vast expanses of expressways, interchanges, wide roads and parking lots, interspersed with the freestanding commercial and residential buildings.

As a result, the traditional city centers tend to falter and fall into a long cycle of disinvestment and decline. With them, a form of human habitat adapted to walking and bicycling, and often already equipped with a mass transit system, gradually goes to waste. Reinforcing the traditional urban centers in emerging economies, keeping them strong and diverse, and reversing the exodus of the well-off residents and higher-status economic activities to the car-dependant environments of the privileged suburbs are crucial battles in the fight for sustainable transport and development.

São Paulo's City Center

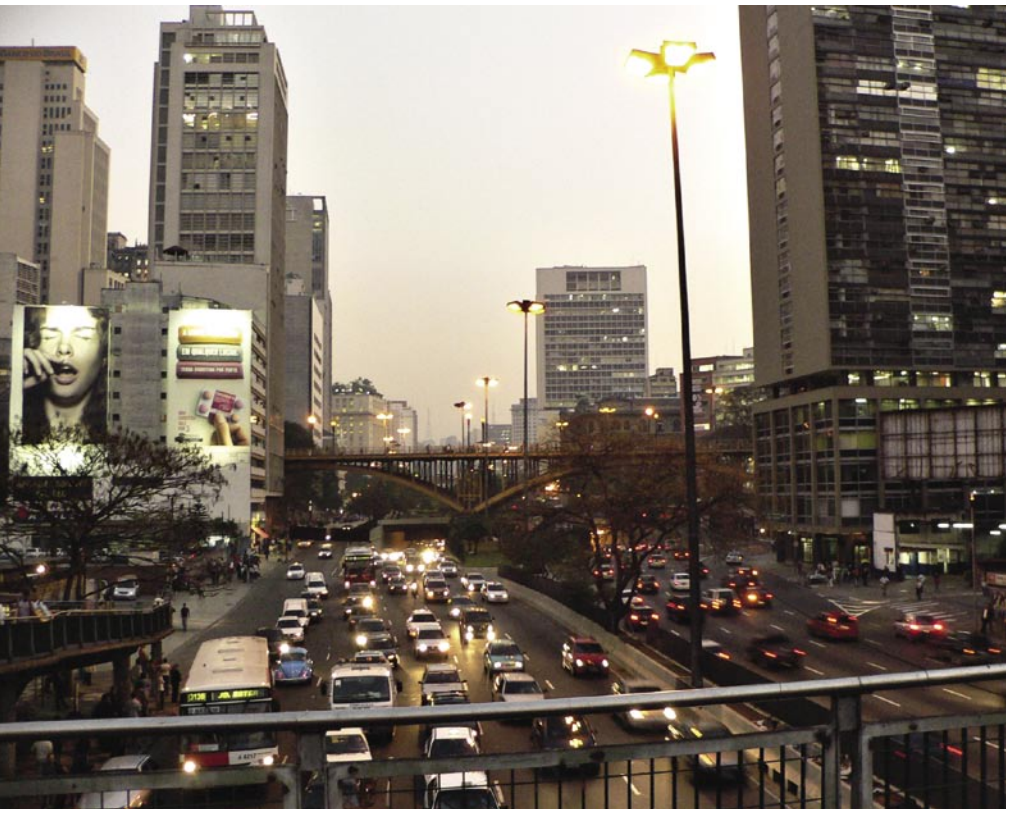
With 19 million people living in its metropolitan area, São Paulo is among the largest cities in the world. Although demographic growth slowed significantly in the last couple decades, the city is still profoundly marked by the influx of millions of rural migrants that followed from the industrial growth and the opening of interstate roads in the middle part of the 20th century. The historic center of the city did not benefit from growth in that period, however. The expansion of automobile use, the appeal of spacious and exclusive suburbs, the rise of glittery new business centers in outlying areas, the forces of the market and the misguided public policies, all converged, drawing out the lifeblood of the old city in the process.

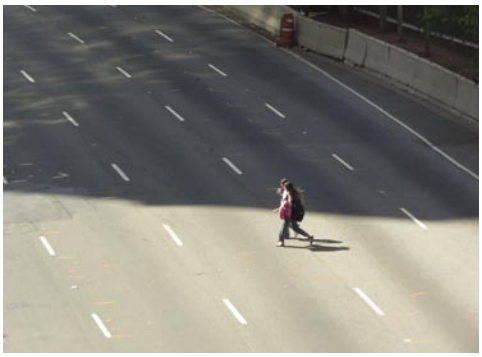
The center fell into a cycle of disinvestment and decline – the number of residents, businesses and jobs decreased, and property values went down, while the amount of people living in the streets, black or grey market street vending activities, abandoned buildings, shut-down stores, deteriorated public spaces, graffiti and other incivilities increased.

From the 1950s on, the multiplication of cars and the radial design of urban roadways brought terrible congestion to the center. Bus service became increasingly inefficient, overcrowded and unappealing; the air and water were polluted, and the physical environment deteriorated. For decades, in an effort to respond to worsening congestion, traffic engineering authorities fit as many traffic lanes as possible into every street available in order to maximize car speed and traffic flow. This only resulted in further degradation to the physical environment and the livability of the city.

Social-spatial polarization in the city has also been an important factor in the decline of the historic center. New, trendy business districts developed in the South-West quadrant of the city, first along famous Paulista Avenue, in the 1950s and 1960s (2-3 kilometers from the city center); and then continually outwards a few kilometers at a time, creating new centers of development every 10 to 20 years. It is not coincidental that these areas are

continued on p. 18





Decades of traffic engineering that has prioritized traffic flow has only resulted in further degradation to the livability of the São Paulo's city center.

Source: Luc Nadal

City Center Revitalization: São Paulo

continued from p.17

located deeper and deeper within the wealthy Western suburbs.

In contrast, the old city center was increasingly split by a spatial-social divide. It stood on a border zone that traditionally begins with the busy central wholesale district in the North-East quadrant closest to the railroad and continues with the industrial and low-income neighborhoods that have expanded eastward since the 1950s. As the middle-class population slowly vacated downtown, the less fortunate side of town gradually expanded into the entire historic district. In a sense, São Paulo's city center has worked as a buffer throughout the second part of the 20th century. It has absorbed the larger flows of lower-income populations, keeping them from overwhelming the privileged neighborhoods of the South-West quadrant.

Sao Paulo's city center has worked as a buffer, absorbing the larger flows of lower-income populations and keeping them from overwhelming the privileged neighborhoods of the South-West quadrant.

Source: Luc Nadal

Competing in a Globalized World

Addressing the decline of city centers like São Paulo's has also taken on new significance at a time of economic and cultural globalization. Somewhat paradoxically, this period has also led to a new search for identity, specificity, and visibility. The projection of a strong and distinctive image is now widely recognized as a key ingredient for the success of cities confronted with global competition. Savvy urban leaders now have their cities carefully redesigned and marketed. Obvious examples of the economic benefits of urban marketing include the growth of convention and tourism industries, as well as the capacity to attract large international commercial or cultural events. The process by which a host city is chosen for the Olympics, for example, reveals a lot about what cities have to do to acquire status and prestige on the international scene.

However, the need for distinction runs even deeper, to the capacity of a city to entice today's increasingly footloose flows of investment capital, and to attract the highest revenue-generating and highest prestige-conferring activities possible. High finance and specialized producer services are among these, as well as cultural and entertainment industries, higher education, research and development, and design. Stimulating this kind of activity requires cities to attract and retain the highly educated, skilled, and talented professionals who are the operatives of the global economy.

People that belong to this group tend to have sophisticated tastes and appreciate goods, services and places to live and work that are 'authentic', innovative, and designer-produced, rather than what's generic or mass-produced. They are avid consumers of cultural goods, including exhibitions, museums, art shows, concerts, and books. They often like the company of artists and creative people. Indeed, they see themselves as part of a "creative class". In a contemporary urban world that's largely given to generic sprawl, well-restored and enhanced historic centers have acquired a key role in providing both the character and local specificity that suits these operatives of the global economy.

Forces of Renewal

Indeed in the last couple decades, in view of the many success stories of urban revitalization that have sprung up worldwide, a large part of the São Paulo political elites as well as the downtown corporate leaders have realized the importance of saving the center from a cycle of deterioration, impoverishment, abandonment, social relegation and stigmatization. More importantly, they gained confidence that they could pull it off.

A turning point may have been the creation of Viva o Centro in 1991 with funding from big downtown banks and its charge to take any actions it could to revive the business potential of the downtown area. Viva o Centro was able to keep the city center revitalization issue on the public agenda despite many changes in municipal administrations and political leadership. They seem to have been influential in the launch of the first official comprehensive city center rehabilitation planning effort on the part of the City, undertaken in 1993, and in the intervention of the Inter-American Development Bank, which helped fund a revitalization package with a US $ 100 million loan, finally signed in 2004.

Private corporations as well as the local, regional and national levels of government have involved themselves in new historic preservation and creative re-use downtown, such as the renovated Central Market building, the two historic railroad stations that have been in partially converted into successful cultural institutions (the Sala São Paulo Concert Hall, and the Museum of Portuguese Language); the Pinacoteca, the private restoration of Shopping Light, a converted power utility office building; and a Banco do Brazil building that re-opened as an arts centre.

City Hall's move back to the city center in 2002 also had a very concrete impact on the area's economy and ambience in the form of the rehabilitation of dozens of downtown buildings and the return of about 11,000 city jobs. Security and maintenance in public spaces have improved and violent crime rates in the city center are dropping.

Opportunities and Remaining Challenges

While real and visible changes have occurred in the city center in the last few years, the reversal of the decline of downtown São Paulo is still not certain, and many difficulties still lie ahead.

In recent years, some instability has marked the direction of policy and public action geared at tackling these challenges. The City Mayor and dominant political party have changed twice in two and-a-half years. Such repeated political transitions brought sometimes sharp divergences in political priorities and technical methods. The city center revitalization package associated with the loan from the Inter-American Development Bank, finalized by the previous administration, has been partly on hold since the 2004 elections.

Advocacy and assistance in implementing a first-rate system of public transportation – of the sort that another Brazilian city, Curitiba, has already taught the world can be done at very reasonable cost – is in ITDP's domain of expertise. The center of São Paulo is currently choked by hundreds of bus lines that share lanes that terminate in the city center at large terminals scattered at its edges. Because these bus lanes do not run through the city center, many passengers must walk long distances to reach destinations in more distant locations.

ITDP is working with São Paulo to develop a set of solutions that would go a long way towards improving the condition of the pedestrian zones at the core of the historic districts. They include the restructuring of the bus system according to a trunk-and-feeder pattern with high capacity, high quality buses; the circumvention of the center for passengers bound to other areas, the suppression of the blighting and polluting central bus terminals, the consolidation of opposite lines and construction of new terminals at the outlying ends of the corridors.

The restoration of the degraded physical environment of the center, including its public spaces, historic buildings, and the thousands of abandoned or under-maintained private buildings, is of high importance. Public space restoration is underway in two major squares (Sé and Republica) and new, if scarce, resources have been allocated by the municipal government. ITDP, in accord with Viva o Centro, is recommending the pragmatic use of private and corporate resources to fund better forms of urban redevelopment, provided that private sector interests in the city center are in alignment with the broader public consensus on the center's revitalization. Viva o Centro has already organized a network of local business and building owners associations to improve the maintenance and upkeep of the public space and private frontage.

ITDP plans to partner with U.S. Business Improvement Districts and with Brazilian legal experts to explore the possibility of initiating in the center of São Paulo the kind of organization that could help with the task of managing street maintenance, safety, security, decoration and animation. Such actions should also include the provision of better alternatives to the thousands of people living in the streets without shelter, support, counseling, and health care, and to the thousands who make their living by vending in the streets – not to mention guarantees of public accountability for these services.

There is a remarkable opportunity to create a strongly defined cultural corridor running through Anhangabau Plaza along rehabilitated north-south avenues, from the Museum of Arts to the Tiete River and the Anhembi Convention Center.

Source: Luc Nadal

The center of São Paulo is graced by a remarkable architectural heri-

continued on p. 20

City Center Revitalization: São Paulo

continued from p.19

tage that goes from the Colonial to the contemporary (e.g., the marquee of the Praca do Patriarca). There is plenty of high design quality and this is a tremendous asset that has the potential to make the center attractive to design conscious people. The physical configuration and the scale of the historic center of São Paulo are almost perfect as a walking and cycling environment of the sort that attracts more and more young people across the world as health and environmental awareness increases. The Centro Velho (district or Se) and the Centro Novo (district of Republica) are linked by two beautiful bridges and a splendid street (Rua São Joao) that crosses the unique open space of the decked Vale de Anhangabau. The trees form a remarkably compact and well-integrated ensemble that is eminently walkable and attractive. In this light, the decking of the Anhangabau expressway in the late 1980s and early 1990s was a true stroke of genius. In addition, many of the highest profile arts and cultural institutions and activities already exist in the center.

The Anhangabau plaza has the potential to become the Champs Elysees or the Piazza Navona of São Paulo – a place of identification for the entire city and a true public space where people can celebrate and connect with the spirit of the city. It should be a thoughtfully managed place where global cultures meet local cultures, including the cutting-edge of all contemporary Brazilian arts and designs, from music to visual arts, dance, design, and innovative engineering.

To achieve this, at least part of the plaza should be redesigned as a great stage and an exhibition space; equipped with support facilities and complemented with indoor exhibition spaces. It calls for a remarkable design, able to realize the potential and focus both the city's creative energy, and the image and identity that the city projects to the outside world.

It is highly important that the Anhangabau and the new city center be planned as the heart of a larger system of connections with the rest of the city and the metropolis. To begin with, there is a remarkable opportunity for a strongly defined cultural corridor on a South-North axis that would reach to the Museum of Arts of São Paulo on Paulista Avenue, via Av. 9 de Julio, and perhaps further to the cultural venues of Ibirapuera Park.

There is a remarkable opportunity for a strongly defined cultural corridor on a South-North axis that would reach to the Museum of Arts of São Paulo on Paulista Avenue, via Av. 9 de Julio, and further to the cultural venues of Ibirapuera Park. (Source: Luc Nadal)

The new contribution that the historic center could bring to São Paulo as a great economic engine in the global, service-oriented economy will require more than a simple change in accessibility and in physical conditions and upkeep. Its renewal as a place for living, working and welcoming visitors will require São Paulo's middle class to look upon the city center with their minds open to its new possibilities, rather than cling to the decades-old stigmas associated with its districts. Such transformation is easier to talk about than to make happen, and it involves a process that will take years. One proven method to start the process effectively is to first appeal to the young and creative people. In the initial phases, they are the ones who are likely to compromise some sense of security and order for the chance to live in a potentially exciting place. The re-defined challenge, then, is how to make downtown fashionable. In this context, the historic center of São Paulo has a number of remarkable cards to play.

Soon the focus would have to shift towards keeping the forces of private redevelopment from extinguishing what makes the center so unique by protecting long-time residents from eviction and displacement, as well as protecting the historical heritage from over-development. Not only do current residents of the city center have rights that must be upheld and protected, they, along with the historic architectural structures, also have a distinct contribution to make to the vibrancy of the city center. ❖

The Rua São Joao is a splendid street that links the Centro Velho and the Centro Novo and crosses the unique open space of the Vale de Anhangabau.

TransJakarta: Taking Stock of the "Bus Wai"

Recent surveys illuminate the positive impacts that the TransJakarta Bus Rapid Transit system has made almost three years into operation, and reveal how it can be strengthened moving forward.

By Darmaningtyas, Instran

Outside of Indonesia, it's a little-known fact that the TransJakarta Busway – which opened in January 2004 as Asia's first full-featured Bus Rapid Transit system and now carries over 100,000 people each day – lends itself to a play on words that gives the system a bit more traction with Jakarta residents.

Initially, there was some concern among Jakarta transport planners that "busway" was an inappropriate name for the BRT system because English is not widely spoken in Indonesia. The word "busway", however, turned out to be remarkably similar to *bus wai*, a phrase that in Indonesian means "bus only". Seizing on this pun, TransJakarta's planners decided to leave the English name unchanged. Lo and behold, in the almost three years since the system opened Jakarta residents have grown accustomed to saying, "take the *bus wai*", implying that using TransJakarta is "the only way" to go. When someone has to be on time for an urgent appointment, instead of worrying about getting stuck in Jakarta's severe traffic congestion, it's preferable to take the *bus wai* – at least for those heading for destinations along a TransJakarta corridor.

The new busways have become a welcome alternative travel option for Jakarta citizens hoping to avoid congestion. Based on a survey of 738 busway passengers conducted by INSTRAN-ITDP in early 2006, 48% of respondents cited shorter travel time as the best aspect of the busway's service.

While 64% of current busway riders are workers, TransJakarta appears to be drawing riders with needs other than commuting to work. 21% of those surveyed were students, 5% were self-employed, and the rest were housewives taking their children to school or running errands.

Above: The Harmony station on Indonesia's TransJakarta Bus Rapid Transit system.

Comfort was cited as the area of service needing the most improvement, with 39% of riders pointing out problems like overcrowding, air conditioner malfunctions, and dirty seats. Only 2% of TransJakarta passengers complained about its security, an encouraging contrast to other bus services in Jakarta.

The first three corridors of the system have all experienced high ridership across the weekday. Buses are usually filled to capacity on Corridors II (Pulo Gadung-Harmoni) and III (Harmoni-Kalideres) during both peak and off-peak hours. Corridor I buses (Blok M-Kota) are full during peak hours, as well as the lunch hour, and on weekends and holidays.

With TransJakarta's ridership as high as it is on current corridors, it seems increasingly hard to believe that DKI Jakarta Governor Sutiyoso had encountered strong public opposition to the system's implementation several years ago. He remained a firm believer in TransJakarta's potential for addressing the city's chronic traffic congestion and actively pushed forward with plans for the busway.

continued on p. 22

Source: Michael Replogle

TransJakarta: Taking Stock of the "Bus Wai"

continued from p.21

TransJakarta was initiated in perhaps the shortest implementation period and lowest cost of any full BRT system in the world. The initial 13-kilometer corridor was designed and built in only eight months. The corridor's infrastructure cost less than US$1 million per kilometer, making it possible for the city to build without outside financing. Controversies eased with the success of the first corridor. On its first day of operation, hundreds of thousands of Jakarta citizens stood in 200-meter queues to use the new busways. Two additional corridors were added in 2006, and four more corridors are scheduled to open in 2007.

TransJakarta's popularity extends to people traveling not only for work-related purposes, but also on holidays or for recreation, something that the systems planners had not originally anticipated.

This is illustrated by an anecdote shared by an elderly passenger that ITDP staff encountered during a recent trip on the busway. Apparently, the man's four year-old grandchild kept begging him to travel on the busways, so after the two of them had reached the Kota station from Blok M, they bought tickets for the return trip as well. Many children seem to love taking the *bus wai*.

Plans to continue expanding the TransJakarta system may allow the system to provide access to a number of recreational spots for tourists and others, and at a lower cost than travel by car. Corridor 5 (Kampung Melayu-Ancol) will likely attract local tourists headed to Taman Impian Jaya Ancol, Jakarta's sole beachfront and top destination among Indonesians across the country.

The Ragunan busway terminal on Corridor 6 (Ragunan-Imam Bonjol) also has significant ridership potential given its location right in front of Ragunan Zoo, Jakarta's second most popular tourist and student destination after the beach.

Tapping TransJakarta's potential as a gateway to popular recreational spots and other points of interest will require planners to explore creative approaches to branding buses, developing travel information and signage; and designing stations.

continued on p. 30

ITDP Initiates 5-year Global Environment Facility Project for Jakarta Transport

Based on Jakarta's bold initiation of a bus rapid transit system meant to emulate Bogotá's, the United Nations Environment Programme (UNEP) has selected ITDP to implement a project to realize further improvements in Jakarta's transportation system. Funding for the project comes from the Global Environment Facility, based on the success of the busway in reducing greenhouse gas emissions.

Jakarta Governor Sutiyoso intends to have ten BRT corridors operating by the time he concludes his second term as at the end of 2007, as well as implement a road pricing system on the corridors

Source: Michael Replogle

In a meeting with ITDP President Michael Replogle, Jakarta Governor Sutiyoso indicated that he intends to have ten corridors operating by the time he concludes his second term as at the end of 2007, as well as implement a road pricing system on the corridors. Such bold plans could propel Jakarta into a position of global leadership in the transportation sector.

While not perfect, the TransJakarta system represents a breakthrough for Asia as the first full BRT system implemented there. Hard-pressed to keep up with demand, the BRT provides a way for Jakarta's citizens to get through the notorious congestion. Because of this, car drivers have shifted to the busway, resulting in reductions of all emissions – including greenhouse gases.

The UNEP project targets enhancements to the system's design, operation, and fare collection, as well as improving routing of non-BRT buses, pedestrian and bike facilities, and implementing demand management.

ITDP will work together with the Government of Jakarta to implement these improvements during the five-year project. A major emphasis of the project will be involvement of key stakeholders, including ITDP's longtime non-governmental organization (NGO) partners Instran and Yayasan Pelangi Indonesia, as well as others.

John Ernst, ITDP's Asia Regional Director, will oversee implementation of the Jakarta project. ❖

ITDP and Clinton Foundation Join Forces

Partnership will mobilize technical support for cities in developing countries that seek to reduce greenhouse gas emissions.

At an event held at UCLA on August 1, 2006, former U.S. President Bill Clinton launched the Clinton Climate Initiative, a Clinton Foundation program dedicated to making a difference in the fight against climate change in practical and measurable ways.

"It no longer makes sense for us to debate whether or not the earth is warming at an alarming rate, and it doesn't make sense for us to sit back and wait for others to act," said President Clinton. "The fate of the planet that our children and grandchildren will inherit is in our hands, and it is our responsibility to do something about this crisis."

Urban areas are responsible for over 75% of all greenhouse gas emissions in the world. During the next 20 years, it's estimated that greenhouse gas emissions will grow three times faster in developing countries than in the U.S., Europe, and Japan. ITDP will partner with the Clinton Foundation and local authorities in developing country cities to implement solutions that reduce greenhouse gas emissions while addressing severe traffic congestion and other problems.

"We're very pleased to have ITDP on board as a partner because of their experience with implementing transportation projects in developing world cities that provide tangible benefits for the environment and for people," President Clinton added.

The Clinton Climate Initiative will assist cities in reducing greenhouse gas emissions and increasing energy efficiency by using the same business-oriented approach that has made other Clinton Foundation initiatives successful. The Clinton Foundation has made a major contribution to the global fight against HIV/AIDS over the past four years by building efficient and effective systems for procurement and distribution of medicine and tests, thus drastically reducing the cost of treatment.

Source: Dan Avila for the Clinton Foundation

Former U.S. President Bill Clinton (left) and London Mayor Ken Livingstone (right) sign the Clinton Climate Initiative-Large Cities Climate Leadership Group partnership. From left: British Prime Minister Tony Blair, Los Angeles Mayor Antonio Villaraigosa, and San Francisco Mayor Gavin Newsom look on.

"ITDP commends President Clinton on this new initiative," said Walter Hook, ITDP's executive director. "Based on the enormous respect that developing country leaders have for President Clinton, we envision that the Clinton Climate Initiative will encourage mayors to take bold measures to reduce carbon emissions."

"This partnership will strengthen the technical assistance that ITDP provides

continued on p. 31

Understanding the Community Impact:
Bicycles in Sub-Saharan Africa

The last two decades saw a mushrooming of bicycle projects in sub-Saharan Africa. Delivering large quantities of bicycles, however, has often taken precedence over understanding how they impact communities, households and individuals. Projects in Mozambique and Namibia are aiming to find some answers.

By Clarisse Cunha,
Bicycle Empowerment Network - Namibia

Source: Top-Mark Stephen in Namibia; Bottom-Clarisse Cunha

During the last two decades sub-Saharan African countries have received a flow of bicycles donated by developed countries. Bicycles are clearly one of the most viable transport solutions for short distances in the region considering their lower price, higher load capacity, speed, range, maintenance, easy procurement and minimal infrastructure required. As Westerners upgrade and discard their old bicycles, they create a ready supply for developing countries. This form of assistance, however, has largely followed a handout approach that often focuses more on its quantity rather than on its quality, appropriateness and measured impact. As a consequence, there is a limited body of knowledge and tested indicators on development impacts resulting from bicycle adoption. Jacana and the Bicycling Empowerment Network Namibia (BEN Namibia) are two organizations trying to fill in this gap through delivery methodologies that integrate gender analysis, participatory community needs assessments, ownership mechanisms and comprehensive monitoring and evaluation systems.

The Build a Better Bicycle (BABB) project was designed by Jacana in 2005. Jacana is an international organization headquartered in Maputo that focuses on community empowerment projects. Aware of gender inequality in the Mozambican context, Jacana decided to develop a project targeting rural women. Due to the burden of their domestic and seasonal labors, and the barriers that women and girls face in socio-economic status, education, health, and rights over their bodies, the country is unlikely to meet the United Nations' Millennium Development Goal for gender equality and women's empowerment. This reality could be changed significantly, however, if transport solutions were planned that take women's specific needs into account.

The core component of BABB's approach is a participatory community needs assessment that recognizes differences between men's and women's daily transport needs, and views bicycles as a means of empowering women in rural areas. In a pilot project in the district of Moamba, 70 kilometers from Maputo, a group of women subsistence farmers chose the criteria for selecting the recipients of a limited number of bicycles. They also defined the terms under which the bikes would be paid for, and identified people to be trained as bicycle mechanics.

To monitor and evaluate the project, Jacana established a set of indicators based on the assumption that bicycles have multiple impacts that improve access to social services, employment and political participation. Understanding the bicycle's impact from this broad perspective makes it possible to trace the relationship between women's bicycle owner-

Recent research in Mozambique shows that girls whose families use bicycles, rather than going on foot, for household chores like carrying water have a 32% higher probability of primary school enrollment.

ship and access to health care services, safe water, education, income generation opportunities, and participation in community activities and women's groups. The existence of linkages between these spheres of social action and appropriate means of transport is clear. Recent research on factors that determine primary school enrollment in Mozambique, for example, showed that girls whose families own a bicycle and use it to collect water have a 32% higher probability of primary school enrollment than girls in rural areas whose families do not use a bicycle for chores (Efe Cummings. London School of Economics, 2005).

BABB's approach is now being adapted to various projects run by BEN Namibia, a non-profit organization based in Windhoek. Since it commenced operations in May 2005, BEN Namibia has arranged the delivery of around 1,200 bicycles to home-based health care projects at the grassroots level. Namibia faces the combination of ineffective delivery of social services and a staggering 23% prevalence of HIV/AIDS amongst the adult population. Problems are exacerbated within the rural setting where the lack of transport systems isolates communities from access to social services. Over 90% of Namibia's home-based caregivers are women. Without appropriate means of transport, they walk long distances to help people living with the disease to live more comfortably in their homes. To have a greater impact and deliver better quality products and services, BEN Namibia recognized the need to develop a monitoring and evaluation system that will, like BABB, be an invaluable tool for improving the quality of similar projects across sub-Saharan Africa.

Through a partnership with ITDP and Axiz, a South African computer company, BEN Namibia will deliver 310 of ITDP's utilitarian, high-quality California Bikes to a group of home-based care volunteers in December 2006. The methodology will include holding workshops with beneficiaries to discuss how bicycles can change their lives, their work and, in a broader sense, the fight against HIV/AIDS in the country. It will also provide general information on the use and care of their bicycles. Besides investing time discussing their work, the volunteers will also pay a symbolic sum for the bicycles as a way of enhancing their sense of ownership of the project. BEN Namibia is developing indicators to better understand the relationships between bicycle ownership, mobility and access to health care.

Measuring bicycles' impact using this comprehensive approach obviously requires considerable time and resources, and demands ongoing capacity building for the participating communities and health workers. But having an effective monitoring and evaluation system of this kind in place will ensure that bicycle programs in sub-Saharan Africa are managed efficiently and have positive, sustainable impacts on local communities.

For more information on this project, contact Clarisse Cunha at **clarisse@benbikes.org.za** and **Aimée Gauthier at agauthier@itdp.org**.

Meme Gudrun, Home-based Health Care Volunteer

Meme Gudrun (right), a home-based health care volunteer in Namibia, uses a California Bike to test a bicycle ambulance prototype being developed by BEN Namibia. Bicycles can help health workers reach up to 15 more patients each day.

Meme Gudrun is a home-based care volunteer in Oshakati, the largest town in the populous North of Namibia. She is a volunteer at TKMOAMS, a grassroots organization that trains villagers to assist people living with HIV/AIDS. She used to walk up to 15 kilometers per day to visit her clients and help with household chores; provide counseling and information on adequate nutrition, hygiene and health; deliver medication and sanitary supplies; and provide basic solutions to common symptoms. Like most Namibian women, Meme also has the added burden of fetching water and firewood, among other activities. Now that she rides a bike on her rounds, she sees more patients, spending more time with each and reaching people that were previously beyond walking distance. She is also able to take care of her household chores and has more free time to lead the life she values. ❖

Source: Michael Linke

"Sustainable Voices" is a section of Sustainable Transport for opinion pieces that are intended to foster healthy debate on controversial issues. The views expressed in the article below are those of the author, and do not necessarily reflect the views of ITDP.

Rail Interests Target Bogotá and Curitiba

By Oscar Edmundo Diaz, ITDP

The success of Bogotá's TransMilenio Bus Rapid Transit system, and the impact it has had on other cities considering mass transit investments, has not gone unnoticed. There are powerful lobbying efforts to build a metro in Bogotá and Curitiba, two cities that have become associated in the public's mind with Bus Rapid Transit. One country in particular that makes both fine wine and urban rail equipment recently sponsored a public transit conference at the World Bank to promote urban transport technology (read: metro rail systems), and representatives of that same country were in Mexico earlier in the year spreading misinformation about Bogotá's TransMilenio and Curitiba's URBS systems. Similar tensions between metro interests (a few specific companies and their national backers) and BRT 'interests' (a rabble of NGOs, academics, technical experts, and a few articulate politicians) are today in evidence in many major cities from Dakar, Senegal to Jakarta, Indonesia.

One of the peculiarities of public debate around urban transportation is that everyone believes themselves to be an expert. At any cocktail party, everyone is a traffic engineer. The problems seem clear: the traffic lights change too quickly to red [on my street]; at the corner of [the street on the way to my office] left turns should not be allowed; delivery vehicles should not be allowed on [my] street at peak hours; there are too many buses [in front of my car], the problem is they need a new expressway [connecting my house to my office, but not *right next* to my house!]; buses will never do [they take space away from my car] a metro is needed. 100% agree that public transport is good -- for other people. But let's put it underground, where the rest of us don't have to see it.

Until recently, there were several misconceptions in the developing world that made us think we were more developed, when in fact they kept us underdeveloped:

- more cars = more developed
- rail-based public transport = more developed than bus-based
- bicycles are for poor people

As more and more cities are realizing that Bus Rapid Transit can provide the same high status service that was previously only the domain of metro rail, and that bike lanes can confer both high status and a healthy ride to work if good facilities are provided, there are signs that certain vested interests are becoming concerned.

The world's metro rail system with the best studies is the one that was never built: Bogotá's. In 1998, then-Mayor Enrique Peñalosa took the risk of telling Bogotanos that a metro was not affordable and decided to implement a modern, self-sustainable, state-of-the-art bus rapid transit system called TransMilenio. Today TransMilenio, with only 82 kilometers out of a total plan of 388 kilometers moves 1.4 million passengers everyday. The corridor with the highest demand, Avenida Caracas moves 42,000 passengers per hour per direction during peak hours. This number is not only higher than the capacity of 85% of the metro systems in the world, but lower than TransMilenio's maximum capacity of 55,000. It is these facts that have metro interests nervous.

In Bogotá, three things happened this year after the Labor Day weekend. First, TransMilenio opened a new corridor. Opening a new corridor

requires adjustment of the operations in the first days after the inauguration, because it is difficult to predict exactly how many passengers will use the new system, and services were not yet adjusted to the new demand. Secondly, a new map of the system was released. A new map needs time for people understand how it works, and some people were confused. Third, on the same day, the old system's bus companies took advantage of the situation and went on strike. As a result, many passengers faced long lines, generating bad publicity. Because of the strike, despite not having optimized its new operations, TransMilenio moved two million people that day, though of course it was more crowded that ever.

Naturally, armchair traffic experts and metro interests took advantage of the situation. This was a good opportunity for metro promoters to say, "What Bogotá needs is a subway. TransMilenio has reached its capacity." TransMilenio is not perfect and faces some operational challenges that are being resolved. In June 2006, ITDP sent a team of the best BRT operational experts to Bogotá whose recommendations are being put in place.

Curitiba, too, faces a challenge from metro interests. Despite the fact that transit ridership is falling in Curitiba, it is not falling uniformly, and two corridors have seen growth. One BRT line is being rebuilt with a passing lane at the stations that will increase the BRT system's capacity significantly. The same approach could be taken in another corridor facing capacity constraints, but enormous investment has already been made in the planning for a metro, and metro interests are making very attractive promises to the city of Curitiba. What could be a better public relations coup than to show that even Curitiba, the mother of BRT, needed a metro?

It is no wonder that rail interests are concerned. Since 2002, 300 delegations from more than 45 countries have visited Bogotá to learn how to implement it in their countries. Most of these delegations also visit Curitiba. The delegations are not only from developing countries. The US also sent a delegation -- from the Federal Transit Administration and Department of Transportation. In May 2006 they produced the report *How to Implement Bogotá's TransMilenio BRT system in the United States*, available online at

http://www.nbrti.org/media/documents/Bogota%20Report_Final%20Report_May%202006.pdf

For this reason, it is not surprising that rail-oriented promoters are trying to implement a metro or light rail in Bogotá, as evidenced by the Alstom Company's spate of infomercial-like articles that have been published in *El Tiempo*, Colombia's main newspaper, promoting the benefits of rail-based systems. In several cities, BRT systems have been chosen over metros, such as in Panama City, Jakarta, and Lima, among others. Even cities with metro systems have chosen to expand their transportation systems using BRT, like Mexico City and Santiago de Chile. This means that the rail manufactures have missed some business opportunities, and what could be better for them than having a metro built in Bogotá? It would give them justification for the argument that BRT systems are not the right solution.

So let's compare some numbers to see how good metro rail systems really are for developing country cities. Today the subway line number 4 is being built in São Paulo, Brazil, and the cost per kilometer is $US 100 million. The average per-kilometer cost of a TransMilenio corridor is $US 15 million – and over half of this amount is used to build infrastructure for automobiles that run on either side of the bus corridor. São Paulo has busways, but they stop at the edge of the city center. Even though Curitiba is in Brazil, São Paulo never built a world class, Curitiba-style BRT system through its city center. Was this to protect the metro ridership?

If Bogotá had decided to build a subway using the 82 kilometers that TransMilenio currently uses, an additional investment of $US 6.9 billion would have been required, equivalent to the construction (including land acquisition) of 2,150 high-quality schools for 1,000 children each. With the cost of one kilometer of a metro corridor at $US 100 million we could build housing solutions for 50,000 people in Bogotá.

TransMilenio's fare is $US .50, while Madrid's metro is 2.5 times higher at $US 1.27. This amount, unlike TransMilenio, doesn't cover the system's operational costs.

The Buenos Aires subway moves only 3% of the population using a 48.9-kilometer system, while TransMilenio moves 19% using 82 kilometers. In the developing world subways move about 5% of the population, 10% at the most. It is so expensive to build a new line that expansion is very slow. It's impossible that enough kilometers of a metro system can be built in five years to move 1.4 million people like TransMilenio does today. The average speed of TransMilenio is 26 kilometers per hour, similar to rail-based systems.

If a BRT system is as efficient or more than a metro rail system, why should we invest eight to ten times more to build a subway, instead of investing in education, water and sewage supply? ❖

New BRT Developments in Latin America

In Guayaquil, an Ecuadorian port city of 2.3 million, Mayor Jaime Nebot opened the first 15.5 kilometer-long corridor of the new Metrovia BRT system. The first trunk line is part of phase one, which entails the construction of two more corridors to complete a 44.75 kilometer-system that will move 620,000 passengers per day. The project has three phases with a total of seven corridors. Stations are allocated every 400 meters for a total of 38. The second corridor should be finished by 2007.

On Sunday, September 17, 2006 the first Car-Free Sunday was celebrated in the city as "Guayaquil at Your Rhythm". 9.8 kilometers of streets were closed to traffic and thousands of residents walked and rode bicycles at their leisure from 9:00 a.m. to 2:00 p.m. The event was organized by the city with the support of Biciacción, a Quito-based non-governmental organization.

In August 2006, Pereira, one of Colombia's major coffee-growing cities, launched Megabus, a 16 kilometer-long BRT corridor that connects the city with the municipalities of Dos Quebradas and La Virginia. 40 stations line the corridor every 500 meters. The system has reduced travel times by 50%. MEGABUS is one of the six BRT projects that the Colombian national government is supporting and the first to be launched after Bogotá's TransMilenio. ❖

In August 2006, Pereira, Colombia, launched Megabus, a 16-kilometer BRT corridor.

Source (both photos): Megabus

South Africa's Legacy or Lost Opportunity?

continued from p. 13

the establishment of "greenway" corridors for bicyclists. Visiting representatives from the City of Johannesburg to Guayaquil took particular notice of that city's transformation through its "Malecón 2000" pedestrianization initiative along the waterfront.

Above: A fact-finding team from the City of Johannesburg visits the Bogotá TransMilenio system (left photo) and the Guayaquil Malecón (right photo) in order to evaluate the potential for such measures in their own city.

For trips around stadiums and Fanfest areas, as well as for some trips from stadiums to hotels, non-motorized "pedicabs" represent an ideal low-cost and zero-pollution option. The widespread use of pedicabs during the 2006 World Cup in Germany helped to satisfy visitor travel needs over short distances. In the South African context, pedicabs also show much potential for providing transport for riders making underserved trips between local communities, and a key generator of local employment. With these attributes in mind, cities such as Cape Town are giving serious consideration to a strategy for developing pedicab service in conjunction with mass transit improvements.

The unique opportunity presented by South Africa's World Cup efforts is very apparent to international organizations with an interest in improving urban transport conditions. The United Nations Development Program and the Global Environment Facility are preparing a grant of US$ 11 million to be used to get sustainable transport initiatives started as part of the 2010 preparations. At the same time, Johannesburg is one of several of the world's largest cities that now belong to the Clinton Climate Initiative, a new William J. Clinton Foundation program that aims to combat greenhouse gas emissions through improvements to urban transport and other areas (see page 23). Additionally, ITDP is continuing its South African BRT efforts through funding provided by the United States Agency for International Development (USAID).

The next few months will be critical in determining whether South Africa's efforts for 2010 will lead to a legacy or a lost opportunity. For the millions of South African residents confined to costly and low-quality transit services, the World Cup may be the one chance to score an urban hat-trick of effective public transport, high-quality public space, and renewed civic and national pride. ❖

Below: Pedicabs played a pivotal role in providing local transport during the World Cup in Germany and may do the same in many South African cities.

TransJakarta: Taking Stock of the "Bus Wai"

continued from p. 22

Feeder Service

Despite the fact that over 20% of current TransJakarta riders now use the bus rapid transit system for trips that they had previously made in private cars, integrating connecting or feeder services with TransJakarta remains a significant obstacle to bringing about a larger modal shift. Over half of the respondents to a 2005 survey of automobile drivers cited the difficulty making transfers from feeder services to the TransJakarta busways as a major obstacle to using them more frequently.

Feeder transport has been implemented, but has simply meant using existing non-BRT buses to serve routes parallel to TransJakarta, and is not managed by a common institution. Bus crews working for feeder transport services often refuse to accept the paper ticket that the DKI Jakarta Municipal Government has issued as part of the single-fare system for TransJakarta and feeder buses. Crews have historically used cash payment for fares and feel at a disadvantage accepting paper tickets that they perceive as allowing payments to go straight to bus owners.

There is also clear evidence that greater reliance on busways would also reduce the travelers' transportation expenses. Some 60% of drivers spend IDR 500,000 (more than US $55) per month on car-related costs; and 28% of drivers spend up to IDR 1,000,000 per month (more than US $111). By contrast, a daily round-trip fare on the busway totals about IDR 150,000 (US $17) per month.

Jakarta does not need to think of feeder transport as necessarily motorized vehicles. From the INSTRAN-ITDP survey in early 2006, 75% of 738 respondents stated that they would bike if bicycle parking space was available at busway terminals or bus stations. This is a pleasant answer because not only reducing transportation cost, bicycles for feeder transport will also reduce air pollution in Jakarta.

A New Example for Indonesia

While TransJakarta continues to take steps to improve feeder services and other key aspects of its operations (see sidebar, page 22), it is already considered a success by other cities in Indonesia. It has inspired the Surabaya Municipal Government to implement a BRT system as well and its first corridor is scheduled to be in operation by 2009. TransJakarta has also attracted students to do research on its technical and public policy aspects, which is contributing to the growth of a group of in-country professionals that will play a stronger role in developing BRT systems throughout the country. ❖

Brazil

continued from p. 7

Bicycle Plans and the Global Environmental Facility

Many Brazilian cities have important plans for bikeways, including four that have been selected to participate in a Global Environmental Facility (GEF) program to improve urban transport in Latin American cities.

Belo Horizonte (population 2.4 million) has examined modal integration and is interested in creating safe bicycle parking and bikeways around the stations of its metropolitan rail network. The city has also included the planning, design and implementation of a cycling network in its proposal to the GEF.

In Curitiba (population 1.7 million), world famous for its revolutionary Bus Rapid Transit system, many cyclists use the exclusive bus lanes as bikeways. This dangerous practice leads to an average of more than one cyclist death each month on the busways. The 90 kilometers of bikeways that currently traverse the city's parks are better suited for leisure use. The city has another 30 kilometers planned for short-term implementation, and an additional 27 kilometers to be implemented in two years.

The Car-Free Day in Porto Alegre (population 1.4 million) has expanded in recent years to include the closing of several large avenues in the city's downtown. The city plans to improve conditions for pedestrian and bicycle transportation as part of its efforts to revitalize the city center. The municipal government has contracted the Brazilian consultancy Logit to conduct a comprehensive study that will include gathering data on bicycle use and needs, plans for a cycle network, and activities to promote cycling.

The mayor of Salvador, João Henrique, is fully behind efforts to implement facilities for bicyclists and pedestrians. Salvador (population 2.7 million) currently has 40 kilometers of bikeways, with an additional 14 kilometers under construction and 120 additional kilometers of bikeways planned. The municipality also has a plan for "shared roads" (where autos and bikes would share streets) in areas around train stations that currently extend 10 kilometers but could easily be expanded.

Brazilian cities can already look to successful examples of bikeway implementation in places like Ubatuba and Rio de Janeiro. With growing support for bicycle and pedestrian facilities from municipal governments, local advocates, international NGOs, and the GEF, many cities are now poised to take steps that can save lives, improve air quality and enhance public space. ❖

Clinton Foundation

continued from p. 23

to mayors in the developing world who are looking for high quality transportation that both improves the quality of life of their cities and combats the threat of climate change."

Many cities have worked individually to reduce energy use and greenhouse gas emissions but most of these practices are not in widespread, systematic or coordinated use, thus greatly reducing their effectiveness. The Clinton Climate Initiative will engage the largest cities in the world and allow them to be leaders for all cities by making the direct benefits from the purchasing consortium, technical assistance, and measurement and communication tools available to other cities throughout the world.

To enable partner cities to reduce energy use and green house gas emissions the Clinton Climate Initiative will:

1. Create a purchasing consortium that will pool the purchasing power of the cities to lower the prices of energy saving products and accelerate the development and deployment of new energy saving and greenhouse gas reducing technologies and products.

2. Mobilize international experts to provide technical assistance to cities to develop and implement plans that will result in greater energy efficiency and lower greenhouse gas emissions.

3. Create and deploy common measurement tools and internet based communications systems that will allow cities to establish a baseline on their greenhouse gas emissions, measure the effectiveness of the program in reducing these emissions and to share what works and does not work with each other.

Mayor Ken Livingstone of London, British Prime Minister Tony Blair, Mayor Antonio Villaraigosa of Los Angeles, and Mayor Gavin Newsom of San Francisco joined President Clinton at UCLA in announcing the Clinton Climate Initiative (CCI). The cities that will participate in the Initiative are part of the Large Cities Climate Leadership Group, an organization convened by Mayor Livingstone and comprised of most of the largest cities in the world that have pledged to reduce greenhouse gas emissions. Participating cities include Berlin, Buenos Aires, Cairo, Caracas, Chicago, Delhi, Dhaka, Istanbul, Johannesburg, London, Los Angeles, Madrid, Melbourne, Mexico City, New York, Paris, Philadelphia, Rome, São Paulo, Seoul, Toronto, and Warsaw. The partnership anticipates that many more cities will join during the 2006-2007 period.

"There is no bigger task for humanity than to avert catastrophic climate change," said Mayor Livingstone. "The world's largest cities can have a major impact on this. Already they are at the centre of developing the technologies and innovative new practices that provide hope that we can radically reduce carbon emissions."

new titles

Options for Financing Bus Rapid Transit in China. Walter Hook, Karl Fjellstrom, Oscar Edmundo Diaz, ITDP. China Academy of Urban Planning and Design. Energy Foundation. www.itdp.org/pub.html

Bus Rapid Transit Planning Guide (working draft). Walter Hook and Lloyd Wright, editors. ITDP, GTZ, USAID, UNEP, GEF, Hewlett Foundation. www.itdp.org/brt_guide.html

UPCOMING EVENTS

Special thanks to the Sustainable Urban Transport Project – sutp.org – for providing additional event-related information

Segunda Feria Internacional de Transporte Masivo
November 8-9, 2006
Bogotá
http://www.transmilenio.gov.co/transmilenio/feriamasivo/index.htm

Lessons Learned from Livable Cities:
An Afternoon with Enrique Peñalosa
November 13, 2006
Los Angeles
http://www.itdp.org/events
Tel: +1 212 629 8001

AusRAIL 2006
November 21-22, 2006
Brisbane
Email: registration@informa.com.au
http://www.ausrail.com

2nd Annual Asian Infrastructure Conference
November 29, 2006
Hong Kong
http://www.terrapinn.com/2006/aic
Tel: +65 6322 2712
anna.lee@terrapinn.com

TRB 86th Annual Meeting
January 21-25, 2007
Washington, DC
http://trb.org/news/blurb_detail.asp?id=6161

UITP 5th Annual Bus Conference
May 2, 2007
Bogotá
http://www.uitp.com/Events/2007/bogota/en/index.cfm
lindsey.barr@uitp.com
Tel: +32 2 663 66 58
Fax: +32 2 660 10 72

NECTAR Conference Porto, FEUP
Porto, Portugal
May 9-12, 2007
http://www.nectarporto.com/
Papers: http://www.nectarporto.com/abstracsub.htm

"We cannot talk about urban transport until we know what kind of a city we want, and to talk about the kind of city we want, we have to know how we want to live."

Lessons Learned from Livable Cities:

An Evening with
Enrique Peñalosa

Former Mayor of Bogotá, Colombia

Monday, November 13, 2006

MTA Board Room
One Gateway Plaza
Los Angeles, CA 90012
take the Metro Red Line to Union Station

Who should attend: neighborhood residents, business owners, policy-makers, students, advocates fighting childhood obesity, and anyone else who wants a more livable Los Angeles!

As Mayor of Bogotá, Peñalosa built the world's premiere Bus Rapid Transit system and hundreds of kilometers of sidewalks, bicycle paths, pedestrian streets, greenways, and parks.

Source: Juan Camilo Macias

Visit www.itdp.org/events.html for further information

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