Curitiba, Brazil
Nicole Mikesh

'People-centric planning on a budget'

It is possible to have a livable city without spending top dollar.

"The dream of a better city is always in the heads of its residents. Our city isn't a paradise. It has most of the problems of other cities. But when we provide good buses and schools and health clinics, everybody feels respected. The strategic vision ... leads us to put the first priorities on the child and the environment. For there is no deeper feeling of solidarity than that of dealing with the citizen of to-morrow, the child, and the environment in which that child is going to live."- Jamie Lerner, former mayor of Curitiba. (ICLEI-Canada)

"The result of the strategy--which put people at the center and emphasized integrated planning--is that the city has become a showcase of ecological and humane urbanism, with ongoing improvements over the past 38 years to social, economic and environmental conditions for its residents. Curitiba has become the most sustainable of cities, in the process proving that applying a city-strategy with strong values and a focus on integrated systems can harness the actions of planning departments to meet common strategic object" (ICLEI-Canada)

CONTEXT
Historical spatial and governance foundation

In the 1950s Curitiba was the modest 150,000 person capitol of the Brazilian military-state of Paraná.

Curitiba was the processing and distribution center for the surrounding agricultural industry. At its peak during the 1960s, the state of Paraná produced 1/3 of the world's coffee (Scwartz, Hugh). After a series of frosts between 1952 and 1975 sent the industry into a downward spiral, workers began turning to Curitiba in search of employment.

During this time Curitiba "was characterized by a shortage of electricity, tele-phones, and paved streets. Only a third of the families living in Curitiba had access to sewers. And traffic was beginning to become more of a problem in the downtown area."

In response to the influx of people, the mayor of Curitiba initiated a Master Plan design competition for the growing capital city. The winning team consisted of young idealistic planners and architects lead by Jaime Lerner.

Above Left: Curitiba Skyline
  (members.aol.com/pochetti6/torre)
Above Right: Context Map
  (brazil.sao.paulo.curitiba cnn.com)
Right: Rua Flores Pedestrian Street
  (www.promobrazil.it)

City Statistics

City Population: 1.8 million

City Area: 106,750 acres

Density Level: 16.86 (people/acre)

Park acreage: 5190 acres

Park space per 100 people: 1.3 acers

Governing Bodies: City, IPPUC, Private-public collaboration

Expenditure per person (2002): US$375.00, 21% of total budget for education (rmi.org)

MAJOR COMPONENTS
Connective corridors:

"Concentric circles of local bus lines connect to five radial lines that go outward from the center of the city. On the radial lines, triple-compartment buses in their own traffic lanes carry 300 passengers each. They go as fast as subway cars, but at one-eightieth the construction cost." (Donella Meadows)

2 mil passenger per day. Designed to encourage density along the corridors, the system expands according to the needs of its riders. (Daniel Wermus S-Dev Geneva-05)

Specially marked bike and pedestrian paths
200 km (90 miles?) of bike paths (Daniel Wermus S-Dev Geneva-05)

Anchors: large parks, patches, & preserves:

• Land reclamation and water recuperation are used to solve both environmental and social problems.
• Green zoning safeguards open spaces and stiff regulations protect every tree in the city." (Ozone- Washington University).
"Nearly one-fifth of the city is parkland, and volunteers have planted 1.5 million trees along the streets." (ICLEI)

"Parks have been created from abandoned dumps and quarries. The numerous "ethnic" groups were then charged with fitting these parks out according to their nostalgia for their past: a wooden Ukrainian church, a sombre Bavarian forest where a witch tells her tales, a Japanese haven of peace in the midst of skyscrapers, a path for strolling Italians…. The pretty artificial lakes are used to prevent flooding." (Daniel Wermus S-Dev Geneva-05)

Neighborhood parks:

"Planning a city means correcting your course all the time … by allowing people to correct you. We wanted to build parks within a maximum of 500 metres of everybody's home: the local people convinced us that we would do better to save the remaining forests … so we got our parks in one or two months instead of having to wait 20 or 30 years for the trees to grow!" (Jamie Lerner w/ Daniel Wermus)
They have 1000+ parks and 5+ Anchor parks.
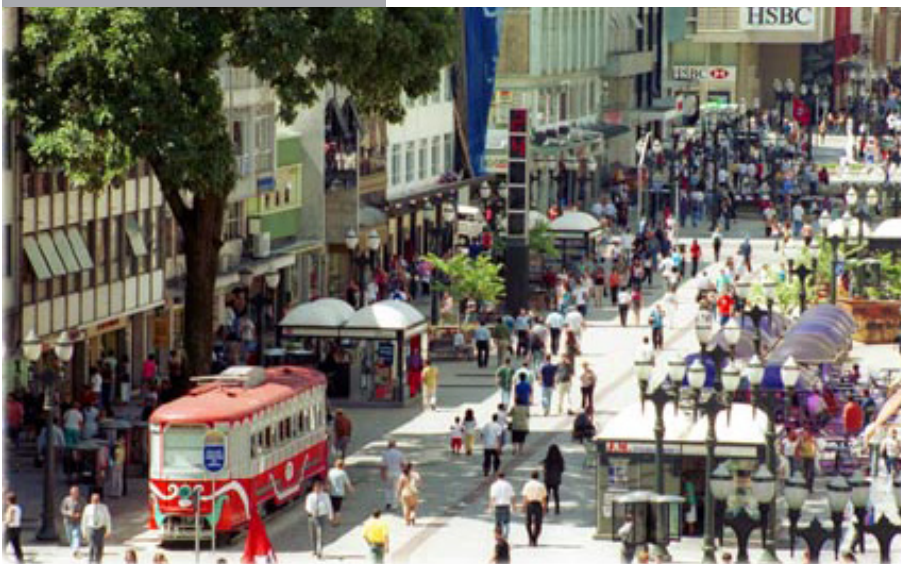
Top: Bus Entry Tube *(garba.org/aboutme/pictures/curitiba)*

Middle: Bariqui Park *(www.gobrazil.net)*

Bottom: Flowers Street where street children tend the flowers. Pedestrian Street. *(www.promobrazil.it)*

Civic, downtown and social spaces:

"He met resistance from shopkeepers when he proposed turning the downtown shopping district into a pedestrian zone, so he suggested a 30-day trial. (25th of November Street.) The zone was so popular that shopkeepers on other streets asked to be included. Now one pedestrian street, the Rua das Flores, is lined with gardens tended by street children." (Donella Meadows).

"Unlike city dwellers in other leading Brazilian communities (and most major cities in the Western Hemisphere), many curitibanos make a habit of congregating downtown after normal office hours. It's certainly not for the nightclubs, of which there are few, and it is not solely for theater and concerts, of which there are a growing number, including two in renovated buildings that had served much less artistic functions in the past. Special annual events include national music and theater festivals, a movie festival, the Christmas lighting display and pageants, and several seasonal fairs.

"Most significant, though, is the continuing activity along the now pedestrian thoroughfares, lined with coffee shops, restaurants and many other commercial establishments.

"Then, early most Friday evenings, many teenagers gather on the principal pedestrian mall. On Saturday morning their place is taken by pre-teenage painters, families out for a stroll, those who have come to listen to amateur musical groups near the park at one end of the mall, and others, on their way to the small food and flower fair in the Passeio Público, just past the other end of the mall." (Donella Meadows)

Left: 24-hour Street, pedestrian street with activities 24 hours a day.
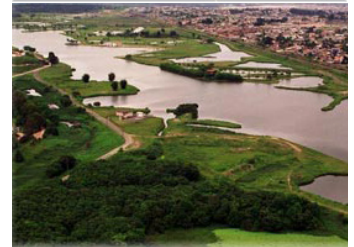Middle: Opera house, built of recycled materials
Right: Bacachen Park
(All 3 images from http://www.curitiba24horas.com/Turismo)

"Curitiba is referred to as the ecological capital of Brazil, with a network of 28 parks and wooded areas. In 1970, there was less than 1 square meter of green space per person; now there are 52 square meters for each person. Residents planted 1.5 million trees along city streets. Builders get tax breaks if their projects include green space. Flood waters diverted into new lakes in parks solved the problem of dangerous flooding, while also protecting valley floors and riverbanks, acting as a barrier to illegal occupation, and providing aesthetic and recreational value to the thousands of people who use city parks" (ICLEI)

"In Curitiba industry is organised around the idea of 'industrial ecology' the planning of industries so that their activities complement each other, sharing heat or transport and forming a flow of materials, the waste of one industry being the raw material for another, is another key to the success of Solar-city." (Brian O'Brien, Solar-Earth)

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Top to Bottom:
Tangua Park
(http://www.curitiba24horas.com/ Turismo/parquetangua.php)
Curitiba's Zoo *(http://www.curitiba24horas.com/Turismo/zoologico/curitiba-zoologico3.jpg)*
Pedestrian Street *(garba.org/aboutme/pictures/curitiba)*
25th of November Street, Pedestrian Street *(promobrazil.it)*

Funding

Acquisition

"Given Brazil's economic situation, Lerner had to think small, cheap and participatory" (Donella Meadows).

Federal Grant used to address flooding- Acquired land around river to create three lakes that can overflow into park space, rather than fortify the river with concrete walls.

Public Private Collaboration- **"How do you include the private sector in your plans?**

- Sometimes we get a very good response: buses, recycling of waste, support for the children. Everything depends on how the equation of shared responsibility is proposed. But so long as business does not understand what the city wants, it works against the city. The responsibility of the authorities is to ensure that everyone participates in the sharing of responsibility. We need to make those who refuse feel ashamed. A business that manufactures a polluting product will not longer be able to sell it. Or we make it our business that it doesn't sell." –Jamie Lerner w/ Daniel Wermus

Unilivre Park *(http://www. curitiba24horas.com)*

Development

Public Private Partnership for bus lines. Subways were being proposed--but with price tags of up to $90 million a kilometer. The substitute: a 'surface subway'--buses on exclusive transitways, radiating out from center city, at a dramatically less expensive $200,000 a kilometer.

Bus fare as lottery ticket- initial incentive to encourage patronage.

Money goes to private bus operators based on performance- paid by distance traveled- rest of money goes to maintaining and improving transportation systems.

Fare is a flat rate of .40-.60 with free transfers.

Built in ridership (Income) through rezoning to encourage higher density along bus lines.

Dedicated Transit Lanes *(garba.org/aboutme/pictures/curitiba)*

Inside Opera de arame *(viaje.curitiba. pr.gov.br/opera5.jpg)*

Recycled Materials were used to build the Opera House and old buses are turned into classrooms, daycare centers and clinics.

"The "green exchange" employment program focuses on social inclusion, benefiting both those in need and the environment. Low-income families living in shantytowns unreachable by truck bring their trash bags to neighborhood centers, where they exchange them for bus tickets and food. This means less city litter and less disease, less garbage dumped in sensitive areas such as rivers and a better life for the undernourished poor. There's also a program for children where they can exchange recyclable garbage for school supplies, chocolate, toys and tickets for shows.

Under the "garbage that's not garbage" program, 70% of the city's trash is recycled by its residents. Once a week, a truck collects paper, cardboard, metal, plastic and glass that has been sorted in the city's homes. The city's paper recycling alone saves the equivalent of 1,200 trees a day. As well as the environmental benefits, money raised from selling materials goes into social programs, and the city employs the homeless and recovering alcoholics in its garbage separation plant." (ICLEI-Canada)

Maintenance

Barter System Street Maintenance – "Orphaned or abandoned street children are a problem all over Brazil. Lerner got each industry, shop, and institution to "adopt" a few children, providing them with a meal a day and a small wage in exchange for doing simple maintenance, gardening, or office chores. Brazil forbids child labor, but Lerner says, "By law, a child mustn't work, but society looks the other way when he goes hungry or homeless or works for a drug trafficker." (Donella Meadows)

Lessons Learned

• Articulation of strong, local core values in a city plan.

• Creation of an independent municipal authority such as IPPUC to provide continuity and implement plans, as well as to monitor planning and research to improve future efforts.

• Integrated planning processes structured to assure that planners in all areas know the strategy and are working with a shared vision and developing their plans together. This way, many problems of unlinked development (e.g., not enough provision for green space) can be avoided.

• Establish a close relationship between public transportation and land-use legislation as a guidance and development tool. Cities' environmental quality and economic efficiency are highly dependent on transportation systems that are well-integrated with urban form because this lets them avoid weak transportation systems and unsustainable dependencies on private cars.

• Developing new models that provide inexpensive, creative urban solutions and reflect local values are an alternative to standard, often-higher-cost approaches.

-- ICLEI- Canada

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Resources

Gnatek, Tim. http://www.pbs.org/frontlineworld/fellows/brazil1203/
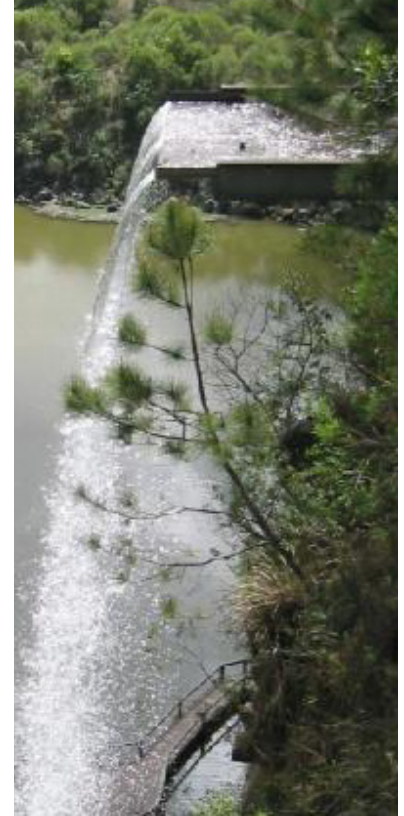
Hallett, Mark and Carmen Vidal-Hallett. "Sustainability in the Big City: What Chicago can learn from Curitiba."

Horizon Solutions: www.solutions-site.org "Efficient transportation for successful urban planning in Curitiba," Vidisha Parasram, 2000.

ICLEI-Canada. International Case Study Series. Case Study: 77. http://www.iclei.org/index.php?id=1139

Meadows, Donella. "Curitiba's visionary mayor." 1995. Global Ideas Bank: www.globalideasbank.org

Meadows, Donella. "The Best City In The World? Making a solid case for better urban planning." Good Medicine (IC#39) Fall 1994, Page 8. URL: http://www.context.org/ICLIB/IC39/Meadows.htm

Michael O. Patterson. 'Curitiba's civic virtues revisited."

Urban sustainability: Cities and the role of technology. Curitiba: Model city? © 2004, The Science Museum, all rights reserved. Making the Modern World is sponsored by the ISB fund of the Treasury and the Cabinet Office. Produced in partnership with mwr and Peter Symonds College, Winchester.

Schwartz, Hugh. " Curitiba, Brazil: Urban Renewal, Municipal Revitalization." MP Comunicação. November 05, 2005

Wermus, Daniel. http://www.s-dev.org/en/decouvrir/villes/villes.php?idIndex=0&idContent=128

Curitiba Fact Sheet. http://www.environicfoundation.org/successstories/curitiba.html 2005

Curitiba Visual Tour of Parks and AS. http://www.curitiba24horas.com/Turismo/pontos_turisticos.htm

Top: Tangua Park *(Martinarentoft.energylounge.com)*
Bottom: Night Skyline from Barigui Park *(http://www.curitiba24horas.com/Turismo/parquebarigui/curitiba-parque-barigui3.jpg)*