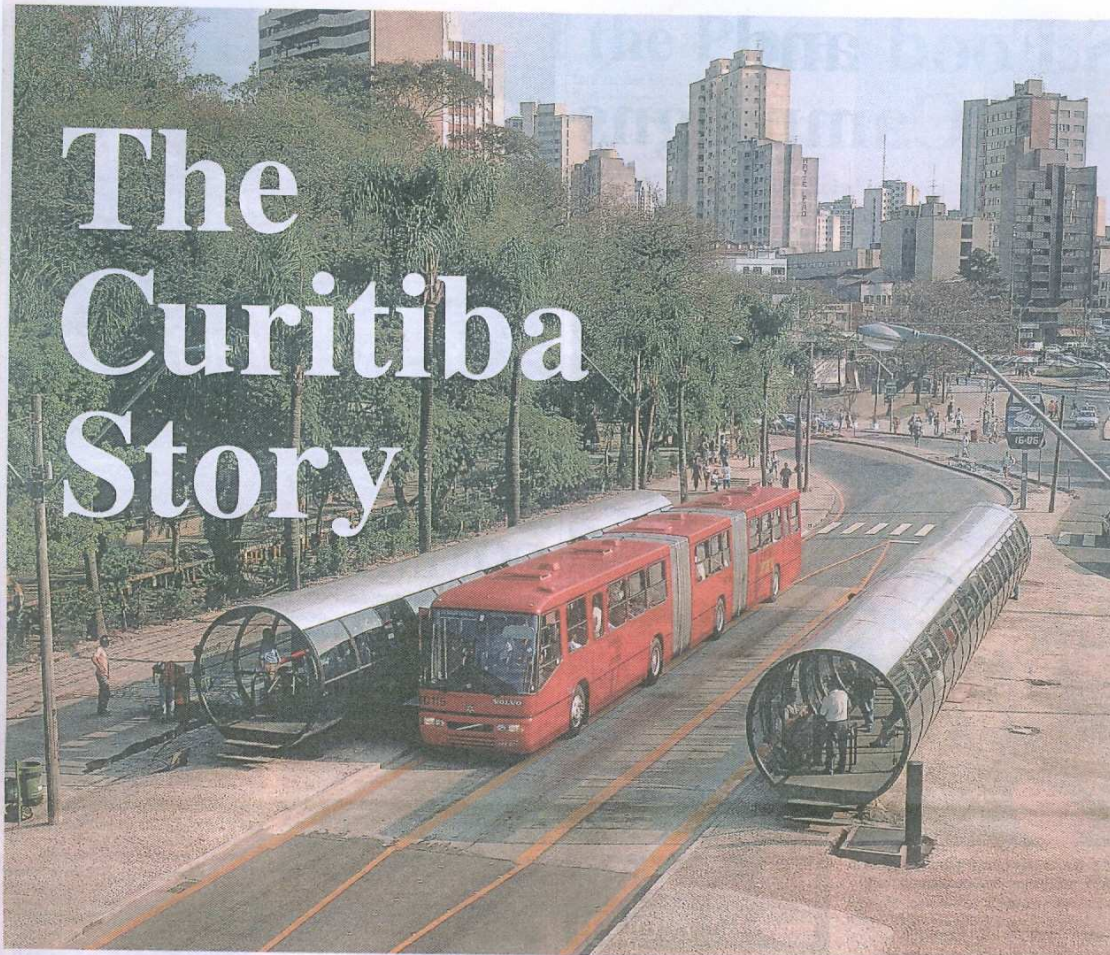




# The Curitiba Story



central road was given over to a bus rapid transit system and local access traffic. The roads either side became one-way thoroughfares. This greatly reduced jams and speeded traffic flow. To encourage use of public transport in the future, city planners did not allow any new commercial buildings in the old city unless they were close to bus stops. Furthermore, they planned city expansion along five, well-served, axial routes.

In 1979, Mayor Lerner introduced the Rede Integrada de Transporte – RIT, an integrated bus transport system, where citizens pay once to go anywhere in the city. Also, under this scheme, the companies running the various buses are paid, not by the travellers but by the city, at a rate per kilometer, travelled by each bus. Passengers pay prior to embarkation at 'tube stations' along the routes and there are bus stops every 500 metres. In 1980, articulated buses were introduced to increase capacity and the public system became more popular.

In 1992, to further emulate a subway system, larger biarticulated buses – 25 metres long and capable of carrying 270 passengers – were brought in. Now, RIT included a three colour-coded service: Biarticulated (red), Speedy (grey – for longer distances, non-stop) and Local (orange), linking in the outlying towns, all for use on one ticket. Already cheaper than car travel, public transport became even more efficient, reliable and easier. It flourishes to this day, operating like a subway system. At peak times, there is a bus every 50 seconds!

Curitiba has a transport system admired worldwide. It has been adopted, partially, by some Western cities but Jaime Lerner says that the system must be fully implemented to gain the full potential: a city that is pleasant to get around and to live in, with reduced traffic, reduced fuel consumption and reduced pollution. Bogotá, the capital of Colombia, has adopted the system fully.

by Paul Ellison

When things aren't working out, it's wise to deal with the root of the problem. This often takes courage but when we get the basics right, the rest flows naturally. This is true for any aspect of life and it works on any scale. Take cities for instance: the typical city is a huge, clogged network, designed long before mass motoring and now jammed with vehicles, their emissions and noise.

Usually, the average planner's response is to make more room for traffic, leading to even more vehicles and pollution. However, three decades ago, one city, Curitiba in Brazil, boldly addressed its traffic problems at root and consequently found that, with vision and willpower, all aspects of city life could be improved.

What prompted this approach? In the 1940s Curitiba's population was around 150,000 and by the 1980s, it was one million. This rapidly expanding city had little money to spend and so, great wisdom and courage were required. Curitiba is now a city of two million souls and an inspiring example of urban development. This is the Curitiba story.

## Transport

In 1972, the traffic and pollution in and around the city centre had reached unmanageable proportions. At this stage,

planners would normally analyse traffic volume and then invest in creating more capacity – wider streets, overpasses, underpasses, or even an underground, subway, rail system. Curitiba's officials though, decided that people should come first, not cars. They decided to be innovative and to take one step at a time. The first would be to close the busiest street to cars. The shopkeepers were angry; they had no experience of pedestrian precincts and fearing loss of trade, they vowed to fight the change.

Mayor Jaime Lerner, an architect and civil engineer, could see the bigger picture and decided upon a plan: the work would



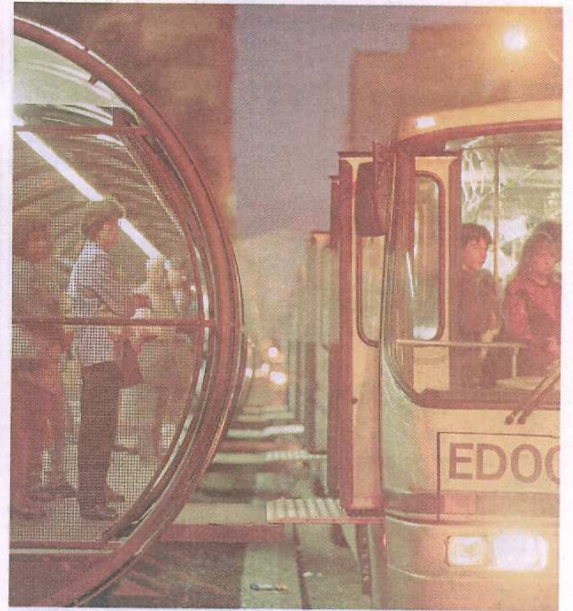
be done so quickly, there would be no time for objections. One evening, teams of engineers swooped upon the area and

worked overnight. It was a fait accompli. That area was now 'people friendly' and, very quickly, the shopkeepers discovered they were getting more business, not less. Soon, the nearby traders were calling for the precinct to be increased. Encouraged, Mayor Lerner and his team decided to put people first on a citywide basis.



Curitiba had three wide, parallel roads passing through its centre. The long-term plan was to create the equivalent of a subway system above ground level. Now, the

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Top left, centre left and above right: biarticulated Volvo buses stop to pick up passengers waiting in bus tubes, which speed the boarding process. People using wheelchairs can enter the tubes via a lift. Photos: © Volvo Bus Image Gallery – Website: [www.volvo.com](http://www.volvo.com) Centre: Mayor Jaime Lerner. Photo: © Jaime Lerner – Website: [www.jaimelerner.com](http://www.jaimelerner.com)





### Housing and Education

Like most cities, particularly in South America, Curitiba has grown rapidly over the recent decades. During fast growth, shanty towns develop where people without skills find themselves in a poverty trap. Curitiba's planners decided that these newcomers should be integrated into productive city life as soon as possible and that, for rich or poor, there should be no ghettos. Low-income developments were therefore brought close to the city centre.

Having designed the road system so well, as the routes expanded, the planners were able to integrate new housing and business developments more easily. They focused on affordable housing, free business installations, free training and other innovations including Autogestão, where the population participates in housing development and planning issues. This offsets the lobbying of the privileged few and enables holistic solutions to be conceived and applied.

As the city's population increased, commercial development grew along the roadside radiating from the centre. The municipality provided schools, clinics and daycare centres. Special warehouses were also built as 'business incubators'. Many newcomers had no job skills - here they received free education with classes designed to meet workforce needs. They were trained with guaranteed employment upon course completion and could open their own businesses within the 'incubation' warehouses.

Housing developments also included specially designed homes for those who wanted to start their own business. Budding entrepreneurs were allowed to buy their own place and received free training and assistance for up to two years. In these properties, the commercial space is located on the ground floor with the accommodation above.

The population continued to expand and increase pressure on the housing market. To help reduce the number of migrants to the city, Vilas Rurais was launched to improve the quality of life in rural areas. Schools and health centres were built in outlying villages and a project called Cambio Verde was initiated. Through this scheme the city buys excess crops and exchanges them for recyclable materials that are collected by the city's shanty town dwellers. The city's poor receive food and the region's farmers make a living. With the introduction of Cambio Verde, city rubbish collection increased with no extra cost to the municipality.

Today, the recycling business in Curitiba has reached maturity, with 80 per cent of city recyclables collected by the poor, who then sell the materials on to private companies. Many earn twice the minimum wage for their efforts.

The recycling centre gives meaningful employment to those under care, such as drug addicts. These constitute about 50 per cent of the workforce. All employees are encouraged to move on to better jobs; they are trained in IT skills on recycled computers. Whilst the centre's main income is from selling materials to private recycling companies, it also creates new products from old; for example, toothpaste tubes are turned into roofing tiles.

As well as the main recycling area, the centre has teaching and conference rooms, a playground and museum. It is an education hub, where all ages can learn about and get involved in all the recycling processes. Any profits go to city charities.

There are 30 parks in the city and each park is different. For example, Iguacu Park is for wildlife. Tangua Park, close to the city centre, is a recreational area. It has an old quarry that has been transformed by a waterfall and river tunnel. Barigui Park has restaurants, playgrounds, walkways and a convention centre. São Lourenço Park is known for its concerts. In every park, there are sheep that have been brought in to keep the grass short. Over the years, the cost of creating these beautiful parks has been covered by property taxes paid on homes that were built overlooking the landscape.

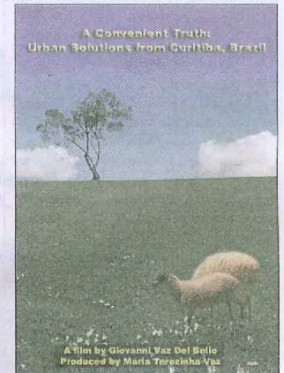
In 1960, the green area of Curitiba was measured at 0.5 metres square per inhabitant but now, it is 80 metres square per inhabitant - more than three times the minimum amount recommended by the World Health Organisation. With more recreational space, tourism has increased too. It is calculated that all this has been

achieved for just 20 per cent of the cost of canalisation. As with the transport, housing and recycling projects, the seasonal parks have been an extremely effective investment for the city.

### A Convenient Truth

Curitiba has lessons for all other urban conurbations. A poor city has been transformed into one of the greenest and most livable cities in the world.

"If every city implemented solutions like those in Curitiba, we would not be



having the current climate problems," says Mayor Jaime Lerner. "We have to work fast because we don't have a lifetime to do things and we don't have the right to sacrifice future generations waiting for projects to be completed."

We at Positive News encourage planners, interested individuals and groups to watch: 'A Convenient Truth: Urban Solutions from Curitiba, Brazil' - an inspiring documentary, available from Website: [www.mariavazphoto.com/curitiba](http://www.mariavazphoto.com/curitiba)

Story from 'A Convenient Truth: Urban Solutions from Curitiba, Brazil' - a film by Giovanni Vaz Del Bello Produced by Maria Terezinha Vaz Contact: [www.mariavazphoto.com/curitiba](http://www.mariavazphoto.com/curitiba)

Top: affordable living space on upper floor to accommodate small business on the ground. Photo: © Maria Vaz Centre: Passeio Público (the Public Walk) - an ecological sanctuary in the heart of Curitiba. Photo: © Eugeni Dodonov/Flickr Below: working waterwheel in São Lourenço Park, in Curitiba. Photo: © Jean Servais Henri Colemonts/Flickr



### Recycling

As Curitiba's shanty towns expanded, they spread along riverbank areas liable to flood. Access for rubbish collection vehicles was difficult and the city did not have the resources to adequately increase their collection fleet.

Civil Engineer Nicolau Klüppel came up with an idea that was to win him a United Nations award. His idea was to get shanty dwellers to collect waste in exchange for bus passes. This was feasible because the bus operators were paid per bus-kilometer rather than per passenger journey. There was a great response, so a waste recycling centre was created and a campaign called 'Trash that is not trash' was launched. The aim was to keep the city clean, reduce landfill and generate income. Within three months, 70 per cent of Curitiba homes were separating their rubbish for recycling.

### Parkland from Floodplain

Each year, in the rainy season, areas of Curitiba suffered from flooding as the local rivers broke their banks. By 1966, there were already shanty towns on the riverbanks; this was a dangerous situation. Having realised that forming canals and embankments would transfer flood problems downstream rather than stop them, Nicolau Klüppel proposed turning floodplains into seasonal parks. Floodplain dwellers were given compensation that enabled them to move elsewhere and work began.

River bends are helpful in controlling water volume and so Nicolau's proposal respected each river's meandering shape. Lakes were excavated in each park to act as flood control areas. When the rivers rise, the lakes become filled, letting their volume out slowly so as not to create flooding downstream.

