

Bus Rapid Transit System

CURITIBA,
BRAZIL

In the 1960s, Curitiba, the capital city of the state of Parana in Southern Brazil, experienced explosive population growth, with the number of residents tripling between 1940 and 1965. Faced with a rapid influx of internal immigrants attracted to city's fast paced growth, traffic congestion became a serious challenge for the city's urban planners. Now frequently referred to as one of the world's original 'smart mobility cities', Curitiba's Master Plan saw the introduction of a number of innovate urban initiatives that have secured the city's reputation as green and well organised, boasting a renowned quality of life for its still growing resident population.

Project overview

The 'crown jewel' of Curitiba's urban planning model, the Bus Rapid Transit System (BRT) was launched in 1974, the first of its kind to combine the service quality of rail services with the cost savings and flexibility of bus transit. Composed of a hierarchical system of services, minibuses routed through residential neighbourhoods feed passengers to conventional buses on circumferential routes around the central city and inter-district routes. The backbone of the system is the Bus Rapid Transit System itself, operating in dedicated lines across the five main arteries of the city's design. Aligned with the Curitiba Master Plan's goal of reducing traffic whilst providing a convenient and affordable public transit system, the BRT is now complemented by the Integrated Network of Transport that operates across the city under a one fare system.

Results and impact

A key indication of BRT's impressive impact has been the modal shift from automobile to bus travel, effectively accommodating population growth over recent decades. Approximately 1,100 buses make 12,500 trips a

day, serving 50 million passengers, a figure 50 times the number of passengers 20 years ago. 80 percent of travelers now use the express or direct bus services and although the population has tripled since 1970, traffic has declined by 30 percent. With regards to environmental impact, efficient public transport networks have been widely applauded. Compared to eight other Brazilian cities of a similar size, Curitiba uses about 30 percent less fuel per capita; resulting in one of the lowest rates of ambient pollution in the country. The impact of the city's BRT system is also clearly evident given the international recognition the initiative has received, for example, in 1996 the United Nations Conference on Human Settlements praised Curitiba as the 'most innovative city in the world'. Similar projects are now replicated by cities around the globe hoping to achieve effective and cost-efficient urban mobility solutions.

Enablers

Curitiba owes its initial success to a visionary and creative leader, Mayor Jaime Lerner, who first introduced the idea of simulating the effect of a metro using the BRT system. Long after Mayor Lerner's tenure as a Mayor and then Governor, Curitiba's approach to integrated urban planning has remained consistent, despite changes in the municipal government's political affiliations. Curitiba's participatory approach to urban planning has also been a key enabler, with a focus on people, a clear sense of purpose and strategic action at the group level always incentivised. Consistent dialogue amongst key stakeholders such as the Instituto de Pesquisa e Planejamento Urbano de Curitiba (Institute of Research and Urban Planning of Curitiba) and the city and council levels has also enabled a practical and realistic approach to integrated, strategic planning. Lastly, a key element of Curitiba's urban development success has been the recognition that urban, environmental and economic development are intrinsically interconnected, an approach that has proved far more successful than the 'correct and clean up' approach applied to most cities urban development challenges.

