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Implemented by:



Transport – Brazil

New tramline for Rio de Janeiro

With the support of KfW, a new light rail system has been put into operation in Rio de Janeiro just ahead of the opening of the Summer Olympic Games. The 13.5 kilometre line links the historic port of Rio in the north-west of the city with the city centre located further to the east. The route will also serve long-distance coach and ferry terminals together with Santos Dumont national airport. The new line thus contributes to environmentally friendly and sustainable transport in a city that is more prone to traffic jams than almost any other in the world, and not only during the Olympics.

Context

According to studies based on GPS data, Rio de Janeiro is, alongside Istanbul and Mexico City, one of three metropolises with the worst traffic conditions in the world. What would normally be a half-hour's journey takes an average of close to an hour in Brazil's most famous city – roughly twice as long as necessary. As a result, Rio's residents spend hundreds of hours a year stuck in traffic jams. At the same time, Rio is not only one of the world's most popular tourist destinations, but also remains, thanks to its many attractions and economic prowess, a fast-growing metropolis. It is estimated that Rio's population will continue to increase over the next decade, reaching more than 13 million people. Those responsible for the city's welfare are planning to gradually expand the public transport network in the hope of preventing further traffic bottlenecks.

This fits in well with the international community's climate goals. According to the Intergovernmental Panel on Climate Change (IPCC), the transport sector is one that offers opportunities for cutting climate-damaging

emissions. Globally, the sector is responsible for almost one quarter of global carbon dioxide emissions. Especially in urban areas, these can be effectively reduced through the development of better local public transport and improved planning of traffic flows. However, this requires rethinking on the part of many city councils as well as considerable investment.

Project approach

On behalf of the Federal Ministry for Economic Cooperation and Development, KfW is funding the new light rail service with a reduced-interest loan of around EUR 130 million, whereas the Brazilian state and private banks are providing nearly EUR 300 million in financing. The Rio tramline forms part of a comprehensive programme

Project name	New tramline
Commissioned by	Federal Ministry for Economic Cooperation and Development (BMZ)
Country/Region	Brazil
Lead executing agency	Brazilian Development Bank (BNDES)





The new tramline will mean twelve million fewer car journeys a year in the city centre of Rio. Source: KfW photo archive, photographer: Kurt Rieckhoff.

with which KfW is co-financing particularly climate-friendly investments in local public transport nationwide, through BNDES, the Brazilian development bank. A total of EUR 265 million has been made available for this project. While these investments may well include tramlines like the one in Copacabana, they also include other forms of rail transport or bus lines and even cycling paths. These initiatives must have a positive impact on the climate.

The "VLT Carioca" light rail system is intended to reduce the volume of car traffic downtown by connecting the historical port area of Rio and the adjacent inner-city districts both to each other and to the main ferry terminal, the long-distance bus station and the domestic airport. There are also plans to provide connections to the existing public transport network, including the metro stations and bus stops.

The new tram system dispenses with overhead lines and is run by electric current via a third rail in the middle of the track. As is the case with most modern tram networks nowadays, the vehicles run on a ballastless, solid track, requiring almost no maintenance. For the most part, the tracks run on a separate track body, meaning that road traffic is only subject to delays at a few points, for example at crossroads, where priority switching ensures local public transport takes precedence.

Impact

The first eight kilometres of the 13.5 kilometre network entered into service shortly before the opening of the Olympic Games. The rest will follow during the late summer and autumn. Thousands of people are already

making use of the tram's first few kilometres. Once the whole network has been completed, it will carry around 76 million passengers annually on its three lines. The trams, which will run every three to fifteen minutes around the clock, will be able to transport 8,400 people an hour on the busiest routes.

According to Werner Klinger, the KfW project manager, the "VLT Carioca" benefits the centre of Rio by providing it with "an environmentally friendly, modern, user-friendly and barrier-free local public transport system that complements air, ferry, rail and bus transport well." Rio's city council says the new tram connects the port and the airport with the city centre "in a faster, safer and more sustainable way".

In statistical terms, it will cut down on around 12 million car journeys per year and prevent close to 325,000 tonnes of carbon dioxide from being emitted over 25 years of use, thereby not only contributing to the alleviation of the traffic situation in Rio, but also by helping Brazil to meet its climate protection targets.



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