

# THE ROLE OF PUBLIC TRANSPORT PRIORITIZATION IN (RE)SHAPING CITIES

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**Conference CODATU XV**

The role of urban mobility in (re)shaping cities  
22 to 25 October 2012- Addis Ababa (Ethiopia)



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**Abstract**

It is a fact; contemporary city planning must consider the strong relationship between territory and mobility. Having the premise and with an adequate plan, Authorities can foresee and prevent the commuting problem and fixing existing weaknesses, and even more, if the relationship is solid can create better communities.

BRT systems have opened the doors to emerging and developing countries, needed of an efficient public system of transportation but at affordable prices, to have not only that, but to create the opportunity for a totally new dynamic in the cities, rethinking the land use patterns, the urban planning, spatial distribution, pedestrian friendly streets, squares, bicycles paths, to make a more inclusive cities, in a more sustainable environmental framework.

Transmetro in Guatemala City (Guatemala), MyCiti in Cape Town (South Africa), and Metrovía in Guayaquil (Ecuador) are relevant examples of how BRT systems have contributed to reach more integrated and sustainable cities worldwide.

These systems have come to be a catalyser of good changes, making the city public transport into a more efficient, safe, and reliable asset. They have provided universal access and guaranteed the inclusion and relocation of the informal vendors of the Historical district, have allowed the construction and successfully implementation of bicycles lanes, new residential developments and commercial areas have been allocated along the corridor, the integration of the city centres (cultural, administrative, commercial and leisure areas) with the stations, calming traffic measures to assure a liveable neighbourhood, among other aspects.

The selected cases show different approaches considered when combining urban and transport planning. All have been conceptualized to provide tailored solutions to each particular context, however always aimed to improve the quality of life in a more and more populated urban areas

## 1. Introduction

All the transportation systems play a decisive role in shaping the social characteristics of each city's inhabitants. In circumstances where the car-based transport modes predominate, their supporting road-based networks define the transportation system and the media promotes the car-ownership as a plus, society becomes heavily dependent on owning and utilizing private travel modes in order to access resources and opportunities.

As a consequence of this dependency patterns develop whereby people may become left out from gaining access to basic opportunities, amenities, facilities and particular, employment. Social challenges commonly found within developing countries, such as poverty and unemployment, intensify this problem even further due to the exclusive and expensive nature of the car-based travel.

Other cities having well developed and integrated public transport systems, land use typically shows a greater mix of high densities. Within high density land use areas, the reduced distance required to access a diversity of facilities results in large proportions of population achievement access to basic opportunities and services with greater effortlessness.

And indeed, there is much debate on the subject and have written innumerable documents relating to this topic, and witty and interesting good practices, however, for purposes of this document wanted emphasizes the first steps, the first actions and plans that has occurred in the cities, sometimes as naive proposal have become high-impact projects for the city and have been, all as a result of the implementation of BRT.

It has been considered that showing any of these examples can encourage new projects in the African cities where the process of improving public transport is happening through the implementation of BRT systems.

## 2. Transmetro (Guatemala city, Guatemala)

Transmetro is a project inspired by Bogotá and Curitiba, and although previous recommendations from studies by Japanese consultants, took shape at the beginning of the last decade (2001).

Transmetro is the technical solution to improve Public Transport System as part of Guatemala City 2020. Within this document, in the chapter dedicated to the Urban Mobility several actions were proposed to improve the mobility in the city.

That same plan also raises a number of interventions d public, to enhance places, streets and whole neighborhoods. As Transmetro, the Guatemala 2020 also proposes a Land Use Plan regarding the idea that each new component of the city planning should include an overlap of the mobility and the territory proposals.

In 2007 was implemented the first corridor in the southern part of the city and then, in 2010, the Central Corridor, and linked to this new system in operations a group of projects have come for the public domain, such as:

- Land Use Plan (POT)

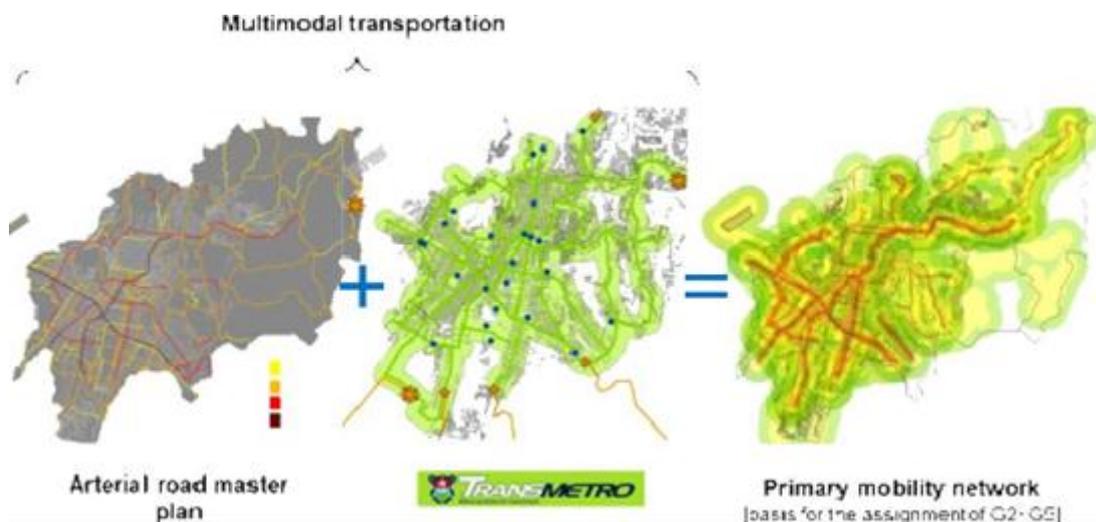
This plan was conceptualized at the same time as Transmetro, and although it took longer to implement, three years later (2010), has a direct relationship with the proposed transportation plan. Among the highlights that POT has in interesting to mention: it regulated the use of land according to

a hierarchy of streets, which at the same time, is linked with public transport corridors: if the construction is closer to those corridors, more density, but if the site is far less density is permitted (See image below).

**Figure 1 – Relationship between land use and BRT corridors (conceptual). Courtesy of Guatemala City Government**



**Figure 2 – Primary mobility network. Courtesy of Municipalidad of Guatemala City**



Source: Courtesy of Guatemala City Government.

POT has based in four pillars or theoretical statements: First, the Transect, which is a series of zones that transition from sparse rural farmlands to the dense urban core. Second, Transit-orient Development, a mixed-use residential or commercial area designed to maximize access to public transport, and often incorporates features to encourage transit ridership. In third place, the Spatial-Temporal Model, that reference of the ability of the land to change and the relationship with urban actors. And last, fourth, Citizen Participation.

- The relocation peaceful street vendors and rehabilitation of public realm.

In order to integrate the Transmetro in the central part of the city had to be restructuring some public spaces that had been taken over by street vendors. Such is the case of Plaza Barrios, Plaza de la República and the 6th Avenue (Historic District), where in the last 15 years had been located about 800 street vendors.

**Image 3 – Image of new public spaces in Guatemala City, clockwise: 1- El Carmen, 2 & 3-Plaza Barrios, 4-Plaza de la República, 5-6th Av South, 6-6th Avenue North (Historical District).**



Source: Courtesy of Guatemala City Government

Throughout, a process of popular consultations, meeting, visits to other projects, managed the relocation of the street vendors in a new building, Mercado El Amate and restoration of the square and the avenue, which has become a landmark of urban change that has brought Transmetro.

Vendors, after a period of 4 months of establishing sales have improved by 15% and 6th Avenue to become a site of daily activity for tourists and residents from the area.

- The Cycling Master Plan developed linked with Transmetro

Another project that has gained importance in Guatemala City as a consequence of Transmetro has been the Cycle Trails Master Plan. This plan was design to complement Transmetro in some specific area were the type of commuter was susceptible to ride a bicycle instead of walking or changing to another sort of vehicle. By January of 2012 the project had been constructed two trails in the southern part of the corridor Aguilar Batres.

The first corridor has 4 kilometres longer and the second one has 2.5, and, in both cases, communicates stations with the University of San Carlos (public university). Part of the success of the project is the implantation of the bike sharing service with 90 bicycles for free.

This project, after one year of operation moves around 4.600 daily trips. And now the Municipality is building the new axis (in the Centre of the Business District) with a length of 18 kilometres.

**Image 4 – Image of the Cycle Trail project in Guatemala City.**

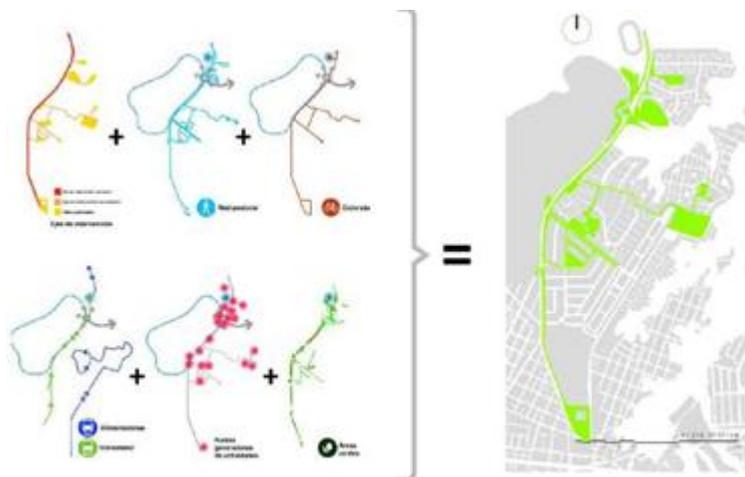


Source: Courtesy of Guatemala City Government

- The Zone 6 Redevelopment Plan. It is a comprehensive plan designed according to the new North axis.

This part of Guatemala City, north of the Historic District is a high populated dense area (45 dwelling per hectare) compared with other areas of the city. In addition it is a population of low medium-low income and public transport user.

**Image 5 – Plan Zone 6**



Plan Zona 6 objective is to generate an intermodal transport network that allows the integration among the BRT system, bicycle and pedestrian circulation spaces. Specifically: Complete the north-south TRANSMETRO service in the city, create continuous network of pedestrian circulation spaces, implement bikeways integrated into public space and TRANSMETRO and ensure accessibility.

**Image 6 – Plan Zone 6. Examples of intervention in the public realm**



Source: Courtesy of Guatemala City Government

### **3. My CITY (CAPE TOWN, SOUTH AFRICA)**

Since 2007 the City of Cape Town has been working on the Integrated Rapid Transit (IRT) system, expected at significantly improving public transport in the City. The first component of this IRT system is the dedicated work on the My City IRT system. While this first stage is primarily a 'Bus Rapid Transit' system, it is designed in a way that emphasises the need for integration with other modes, the land use, City Centre and other stakeholders.

In 2010, the City Council adopted My City business plan. However, work began several years earlier, ahead of the FIFA 2010 Soccer World Cup, which gave impetus to improving public transport in host cities, with significant funding from national government.

Over the next 15 to 25 years, the plan is to roll out the My Citi network across Cape Town, including to the densely populated areas of Khayelitsha and Mitchells Plain. While there is a

high-level concept for the eventual full system, exact routes and timing will depend on input from the public, development needs and available funding. The objective is to have access to safe, reliable, affordable public transport services within 500 m of the majority of homes in the city.

My City has been the catalyst for several projects in the urban space, some planned from the outset as part of the project, such as Art in the Stations, and other planned during implementation of the system as in the case of interventions in Street City Centre.

### **4. Art at stations**

One of the most relevant is Art in the BRT stations. This idea was originally born with Rea Vaya in Johannesburg but Cape Town has taken with great enthusiasm. The idea is based in complementing each of the stations My City with plastic elements designed by some selected artists; within established parameters and the given condition of each station, based on this the artist has the freedom to create a "mural" or painting that evokes the life of Cape Town.

**Image 7 – Art in My City - Example of the murals.**



Source: pictures made the Author

In fact, regarding the station itself, it is a very symbolic building with an architectural language that speaks of the city, multiculturalism and people in Cape Town. With this artistic intervention project My Citi stations have been nominated for several architecture competitions regarding to its social function.

Cases Civic Centre station, the art is reflected in the large murals each side of the station and is planned that at the end of the expansion works new pieces of art will be installed in the station foyer. In the rest of the stations has sought to artistic manifestations are related to neighbourhoods, cultures or customs of the area. Stations become carriers of culture, history and communication.

## **5. NEIGHBORHOOD PAARDEN IELAND**

Myciti has begun to change behaviour and land use of some parts of the city, the most obvious example of this is the sector Paarden Eliand (Horse Island), where the BRT was located through an industrial area to reach residential areas. During planning, rather than seek a peripheral corridor, was implanted in a disused tract of the sector and put two stations along this segment. The intervention was total: busway (with the renewal of pavement), installation of two stations, bike lanes, landscaping and urban furniture.

**Image 8 – Sector Paarden Eliand**



Source: pictures made the Author

The effect was almost immediate, with a renewal of some existing businesses such as factories or offices, in the same way, there are currently six projects of new offices in the area, two cafes and a concrete proposal to renovate the adjacent blocks sector.

The City also performed a façade painting project and promoting the use of the bike path that runs parallel to the BRT.

**Image 9 – Cerro de Santa Ana and other plazas in the surrounding areas**



## **6. METROVIA (GUAYAQUIL, ECUADOR)**

As noted by the Latin American Development Bank, "Guayaquil has experienced the urban renewal process faster and wider Latin America in recent decades." Its transformation began in the nineties with the project Malecón 2000 and spread to avenues, streets and neighbourhoods with the restoration, construction and environmental sanitation significantly transformed the city.

A change like this has also included the renovation of the public transport system to not only, beautify the city and generate tourism, but also promote proper use of public spaces, culture and raise self-esteem of the population.

Thus was born the Integrated Mass Transport Metrovía, which is a BRT system that opened in 2006 under the local government administration but with strong support from central government. It currently has two active trunk routes and one under construction, plus 16 feeder routes, 4 terminals, and 59 regular stations.

Metrovía is an excellent example of an integrated planning where transportation and urban renewal together to change an entire area. While the Municipality of Guayaquil launched Metrovía also launched several strategic projects, structuring and comprehensive multiplier effect, framed within the Urban Development Regulation Plan approved in 2000. These projects were mainly in the city centre and the periphery. At the centre started the project Malecón 2000, which managed the centre's direct relationship with the river, recovering 14 hectares of open space, with various commercial and recreational activities for the use of all city residents and reuse the housing stock across the sector.

This project was later complemented by the improvement of the main axes and urban spaces of the centre, by updating public service networks and recovery of public space, parks, plazas, and avenues, among others.

This process of renewal of the central area has been complemented with other interventions such as the partial recovery of Cerro Santa Ana, one of the traditional neighbourhoods, connected to the area of the Malecón, which represented a conflict zone for the redevelopment of the area recovered from the Malecón and downtown in general. This last intervention was characterized by generating business and employment, increasing income, reducing poverty in the neighbourhood and the decrease in crime rates. However, it is important to note that this has been a partial intervention and that the original conditions are still present in more than 50% of the area and as stated it is a threat to the achievements of the recovery centre.

In the same way, there have been strategic projects aimed at addressing the peripheral marginal areas of the city, characterized by demonstration and comprehensive interventions, which include expanding: the ability of the urban road network that can take public transportation within neighbourhoods, expanded coverage of home services, and environmental and social recovery. Within the provision of social services are the following projects:

- Projects zoned for recreation and sport, as Parque Viernes,
- Projects for the provision of social infrastructure: Municipal Comprehensive Care Centres (CAMI), which underpins the delivery of goods and social services to poor urban communities. They engaged in initial education, micro-enterprise training, preventative actions to youth, sports and community building activities among others, and
- Projects mixed social and recreational infrastructure: As the project "Development of marginal urban areas of Guayaquil, ZUMAR" in the area of Bastion Popular, partly funded by the European Union between 2002 and 2006 with the aim of improving quality of life of the neighbourhood population, with emphasis on those most vulnerable such as children, women, and youth, through actions in the areas of basic health services and education, infrastructure and road-home services, environment, recreation and strengthening neighbourhood organizations.

**Image 10 – Some projects related with Metrovía**



Source: Flickr

As shown by the examples given and many more that are being carried out, the role played by public transport, especially BRT systems, and the renewal and reshaping of the city is very wide-ranging, is a great opportunity to promote economic development, social inclusion and equity. And all this with strategies, actions and projects that do not necessarily have a high cost.

## **7. Conclusions**

- The implementation of BRT systems has been a catalyst for other urban integration project. In some cases this complementary projects has been paired with the BRT but in others has resulted as a consequence.
- The fact that BRT systems coexist in the same space as other mobility and access services, allow planners to integrate and simultaneously modify the public and private realm.
- Planning for BRT systems should ideally go according with planning of the surrounding space both public and private space, due to the inherent relationship that these two have.
- The best mobility projects that are related to BRT systems are those that support non-motorized travel, pedestrian projects, bike paths, open space and reduction in the speed of motorized traffic.

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