

UN HABITAT

FOR A BETTER URBAN FUTURE



1. Name of practice

Medellín's Amazing Metro System:

Colombia Uses Public Transport To Drive Societal Change

2. Location(s)

Medellín, Colombia

3. Actors

Municipality in cooperation with the private sector

4. Issues addressed/ focus

Mass public transportation reaching the urban poor

5. Background

The public transportation system in Medellín, Colombia, is one of the most successful in the world. It is successful for promoting not only environmental sustainability, but social equity as well. In 2012 it was named one of the top transport systems in the world by the Institute for Transportation and Development Policy (ITDP), a global consortium of organizations founded in 1985 to promote

sustainable transportation worldwide. The city [of Medellín] transformed violence and despair into hope and opportunity, using sustainable transport as one of the key levers to drive change.

6. What was/ is being done?

The back bone of the city's transportation system is the *Metro de Medellín*, that serves over half a million (553,000) passengers every day. This project was financed by a public-private partnership led by the city. Construction took ten years, with the last major expansion completed in 2006. The system saves 175,000 tons of CO₂ every year, the equivalent of planting 380,000 trees that would occupy 11% of the city's land mass. Metro calculates that it saves the city \$1.5 billion in respiratory health costs every year, and \$4 billion in reduced traffic accidents and congestion.

Perhaps the most impressive feature of the metro system is the world renowned *Metrocable* system, a network of 9 cable car systems that take passengers up steep mountainsides that line the Valley of Medellín. The lines were completed in 2010, with plans for future expansion. The metro cable system has revolutionized mobility and accessibility for residents of Colombia's second largest city, particularly the poorest — and often most violent — communities that line the valley of Medellín's mountainous region. Prior to the development of the Metrocable system, residents of the "*barriadas*" (squatter communities along the mountainside) had to brave a treacherous journey down the mountainside, which could take hours on foot or on infrequent and unreliable buses. Getting basic access to commerce, education, healthcare, and other necessities could take all day, sometimes making it impossible for people of these communities.

7. Outcomes and impacts

Today, a fare of \$1,800 pesos (about \$0.60 U.S.) buys a comfortable and scenic 25 minute ride down the mountainside, and a transfer to the metro cars below. Plans are in place to link the city's numerous privately-owned bus lines to this one-time fare ("*Metroplús*"), further extending mobility and accessibility for all of the city's residents. The benefits of the metro cable system has increased accessibility to the mountainside communities has infused a new stream of commerce, services, and tourism to the *barriadas*. New nodes of transit hubs have revitalized some communities that were once terrorized by "narco" drug lords, violence, and armed conflict. Finally, the transit hubs have spurred new investment in infrastructure, services, and amenities. Favela residents enjoy new parks, schools, hospitals, and police services, many of which are integrated into the infrastructure of the metro system itself.

8. Sustainability

The system is well established and unlikely to disappear as this would cause a major social revolt. Since the Medellín is a public-private cooperation, it even has the potential to be run profitably (to be confirmed).

9. Replicability

Other strategies to increase sustainability in Medellín's transit system include:

- The "Urbano Integral" project that connects public spaces and pedestrian routes to green space and parks (*picture, right*). So far, Metro has created 320,000 sq. meters of green space throughout the city, the equivalent of 40 professional soccer fields.
- A digital portal "Miportemetro.com" which allows users to calculate their carbon, commute time, and monetary savings of using the metro system.
- "EnCicla," a public bicycle sharing program that connects universities to mass transit, along with other key destinations in the city.
- "Comparte tu carro," a ridesharing/carpooling program, which currently includes 171 institutions and growing.
- Plans are in place to improve vehicle exhaust emission controls and sulfur content and transition the city's entire fleet of taxis to natural gas fuel.

The lesson of Medellín is an important one for all communities to consider. Well-designed public transportation systems are about more than just getting people around in a more environmentally friendly way: they can also be positive drivers for social and economic change.

It is less important whether the same technical system can be replicated elsewhere rather than the social and political effect of integrating slum dwellers in the mass transportation system. Even if the system would run on a deficit the social peace and reduction of urban violence justifies the related public expenditure.

10. Credits / Source:

This text is an abridged version of a text originally written by *Jorge Madrid, a Research Associate on the energy team at the Center for American Progress.*

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