

# Recent smart city projects in Latin America

## Brazil

Rio de Janeiro recently entered into a public-private partnership to modernize its lighting system. The project is intended to modernize the public lighting system in Rio de Janeiro and install other smart city technologies. This will include the replacement of 450,000 street lights with high-efficiency LED bulbs, the development of a remote management system for the public lighting system, the installation of 10,000 HD cameras, 5,000 Wi-Fi hotspots, 6,000 traffic management nodes, 4,000 sewer sensors and a command system.

The Smart Rio Project benefited from a 20-year sub-concession provided by RioLuz, a state-owned Brazilian entity, and stable cash flow projections during the term of the concession as a result of the revenue structure under the sub-concession, which is backed by a certain public lighting tax. As a result, the consortium was successfully able to raise US\$165.5 million for the project in the capital markets.

The municipality of Curitiba in Brazil has also announced plans to tender a 23-year street lighting public private partnership with the auction expected to take place in June of 2022.

## Chile

Santiago—named the smartest city in Latin America by the IESE Business School in its 2020 Cities in Motion ranking—has demonstrated a commitment to a number of smart city initiatives in transportation and mobility, environmental sustainability and public safety.

In 2014, the city of Santiago began an electric bus fleet replacement program. The emissions-free electric buses are substantially more cost-effective than conventional diesel buses, costing about 70 percent less to operate. Charging stations integrated throughout the city's bus stops allow the buses to be fully charged within about five hours. The "ElectroRuta Enel X" initiative in Chile would be the first national electric route, intended to connect more than 5,000 kilometers from the north to the south of Chile, with a fast-charging station for electric vehicles every 60 kilometers.

In 2021, as part of the "ElectroRuta Enel X" initiative, Enel X announced strategic partnerships with Uber and Volvo Cars Chile to help accelerate the development and adoption of electromobility initiatives in Chile.

This focus on "clean mobility" has resulted in decreased air and noise pollution, furthering Chile's clean energy initiatives and decarbonization process. A study published by the United Nations Environment Programme in 2017 estimated that a fully electric public transportation system of buses and taxis in Santiago could prevent 1,379 deaths by 2030.

## Colombia

Colombia presents an interesting case study for inclusive smart city projects and technologies driven by Colombia's communities.

The city of Medellin, for example, began studying proposals for projects to tackle the city's crime and poverty through investments in lower-income communities, such as the cable cars that began operating in 2004, and have become a lifeline for residents of the mountainside communities, lowering their commute time to the city center from two hours to approximately twenty minutes.

The Integrated Emergency and Security System (Sistema Integrado de Emergencia y Seguridad Metropolitana) (SIES-M), created in 2013, convenes representatives of various governmental agencies responsible for responding to emergencies, and utilizes information from emergency calls supplemented with data from video surveillance cameras throughout the city and the governmental agencies themselves, so that emergency services have cross-referenced data to respond in a coordinated matter.

Sustainable transport was another focus of Medellin, with the Smart Mobility System (Sistema Integrado de Movilidad de Medellín) (SIMM), a system of integrated services, and Metroplús, the city's bus rapid transit system, as prime examples. SIMM's objectives of providing timely and accurate traffic flow, public transportation data collection, and incident detection are realized through integrated mobility management technology.

The synchronization of Medellin's multi-modal transportation system empowers the government and the public with real-time data that provides end-users with effective and energy-efficient alternative transportation solutions.

## Panama

Panama City recently opened the first metro system in all of Central America, designed to help solve urban congestion problems. This project also included free wireless internet access points and bus tracking capabilities at bus stops throughout the city.

