Colombia

TransMilenio Bus Rapid Transit

Source: TransMilenio Brochure
(https://www.transmilenio.gov.co/)

A bus rapid transit (BRT)[1] system that seeks to address the physical, communication and attitudinal barriers towards people with disabilities, women and other vulnerable groups.

TransMilenio is the one of the world's largest bus rapid transit (BRT) systems[2]. It is a network of high capacity buses carrying 2.3 million passengers a day around Bogotá in Colombia.

TransMilenio was created in 1999 to alleviate heavy congestion in the capital and to provide an efficient and cost-effective transportation system for Bogotá's eight million citizens. Plans for the BRT system received strong political support, as well as adequate financial backing and committed participation from the traditional transport industry. It went from a well-defined but general idea to an operational project in just three years. Its successful business model has been replicated in many cities around the globe and it is one of the most cost-effective mass transport solutions available.

In 1999, TransMilenio S.A. was created as a public-private partnership (PPP) to construct and operate the BRT system. In this partnership, the public sector was responsible for the investment needed to develop the infrastructure, and the private sector was responsible for the system's operation and maintenance. Later, in 2012, the Integrated System of Public Transportation (SITP)[3] was established to operate all public transport systems across Bogotá, including TransMilenio and the other bus and taxi operators.

This case study reflects on the role and responsibility a transport infrastructure project can have in creating a more inclusive society. TransMilenio BRT has evolved from its original mission of providing mass transport services to collaborating with other agencies to lead the inclusivity agenda for the citizens of Bogotá. In recent years, it has incorporated inclusive and social governance into its operations and administration. Since 2016, TransMilenio and its concessionaires have jointly developed a model of social responsibility and sustainability, promoting civility, empathy, tolerance and solidarity among passengers and citizens of Bogotá.

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[1]   BRT systems are networks of high capacity buses that mostly use exclusive lanes. They combine the capacity of a metro system with the low cost and simplicity of a bus system.

[2]   Some examples of large BRT systems are Jakarta Koridor, Cambridge Busway, Amsterdam Zuidtangent, São Paulo ABD, and Ottawa BRT. BRTs are the backbone of public transport systems in Latin American cities. They move 21 million passengers a day in 55 cities.

[3]   In Spanish, *Sistema Integrado de Transporte Público* (SITP) is the operator for all public transportation in Bogotá, Colombia. It is organised and managed by TransMilenio.

Project Overview

Key words	Accessibility, disabilities and impaired mobility, women, governance, low-income, inter-agency cooperation
Sector	Transportation
Background	Colombia's urban population has increased significantly over the past 40 years due to socioeconomic factors, with Bogotá, the capital, absorbing a large number of migrants from rural areas. This has created major challenges for infrastructure operators and developers, including in the transport sector. The city and its residents desperately needed a cost-effective and inclusive transport system.
Size	**Phase I (1998):** USD 213 million[*1].
	Phase II (2014): USD 329.2 million, of which USD 123.9 million was a loan from the International Bank for Reconstruction and Development (IBRD) and USD 10 million was a loan from the Inter-American Development Bank (IADB). The remainder of the amount was contributed by the Capital District of Bogotá[*2].
	Phase III (pre-financing stage): an estimated USD 860 million[*3].
Stage	Operational
Why of interest	• It is one of the largest mass transport projects in Latin America • It was created to improve access to, and the quality of, public transport for citizens and to connect low-income residents to the city centre • Adapted international best practices and guidelines for Universal Design • Strong political leadership and inter-agency coordination • Social inclusivity programs for vulnerable groups - people with disabilities, women, homeless and informal vendors (traders who operate without a permit) • Stakeholder engagement programs that focus on social inclusivity and collective ownership awareness
Project objectives	• Provide a comfortable, safe and modern transport service • Provide a service that meets minimum standards of quality in terms of travel time • Transform the transport system into one that promotes equal access for all social classes • Comply with internationally recognised quality standards, fulfilling the minimum requirements for engineering, to provide a comfortable, safe and effective service
Project Lifecycle Assessment	**Project preparation –** the project had strong political support. Project development objectives were consistent with the city's strategic plans. Accessibility design requirements were incorporated into the infrastructure based on national and international standards. A standardised layout was used for all stations, including accessible facilities for passengers with disabilities. **Project procurement –** procurement of buses that enable easy access for passengers with disabilities, and improved vehicle design. **Construction –** public spaces were built in lower income neighbourhoods. Residents were involved in the design process and members of the local community were employed. **Project monitoring and evaluation –** the number of passengers and quality of service are monitored[*4] on a yearly basis through user surveys, and demand and supply data has been captured from 2008. Recent adaptation of ISO 26000 social responsibility guidelines, collection of data on users, annual reports on service, and inclusion of corporate social responsibility (CSR) targets since 2017.

[*1] Phase I - total investment: USD 213 million. Financed with a local fuel surcharge (46%), general local revenues from a capital reduction of the partially privatised Power Company (28%), a credit from the World Bank (6%), and grants from the National Government (20%). TransMilenio: A high capacity – low cost bus rapid transit system developed for Bogotá, Colombia, (Hidalgo, D., no date).

[*2] ICR Review Bogotá Urban Services Appraisal Report, (Independent Evaluation Group, World Bank, 2015).

[*3] JGlobal - Asset Data Sheet, (IJGlobal, 2018)

[*4] Transmilenio has several monitoring systems to produce consolidated annual reports, publicly available on its website. The service surveys are titled, "How are we doing?" or *¿Cómo vamos?* in Spanish.

Project Description

The TransMilenio BRT system consists of several interconnected BRT lines that mostly run in their own lanes. The first phase of implementation was completed in 2002, with the second phase completed in 2006. By 2012, TransMilenio had 12 lines running through the city.

The main lines are known as trunk lines and cover 112 kilometres (km). Feeder lines that provide access to the trunk lines cover 440 km of routes in the outlying districts. The most recent lines consist of 1,795 km of complementary, urban and special zonal areas.

There are more than 3,500 buses[4], which carry up to 240 passengers per bus. The buses have a maximum operating speed of 28 km per hour during peak time[5].

On average, 2.3 million people use TransMilenio daily[6]. They board from raised floor stations that are accessed via footbridges or pathways.

TransMilenio is the first BRT system in the world to reach operational productivity levels equivalent to a metro system[7]. At its peak load, it is the busiest BRT system in the world, carrying more than 250,000 passengers per hour. It is also one of ten BRT systems worldwide to hold the highest Gold rating using the 2013 BRT Corridor Standard, which is based on international best practices for connectiveness, coverage, size and service[8].

At its inception 18 years ago, the main objective of TransMilenio was to provide a modern and efficient transport scheme for all of Bogotá's citizens. In many cities, the BRT system is used as a tool to promote economic growth, alleviate poverty and achieve social and political integration while improving the environment and regenerating public space. In Bogotá, it also aimed to improve efficiency and safety by providing a fast, reliable and accessible service, especially to low-income neighbourhoods on the outskirts of Bogotá.

It is a mass transport solution that supports private sector involvement in service provision. TransMilenio also offers environmental benefits through reduced air pollution and emissions.

From the start, the project had strong political support, driven by the Mayor of Bogotá, and was developed in line with national and city government policies and strategies. The system was designed to meet national and international standards, drawing on lessons learned from similar projects. It went from the drawing board to operational within three years.

Design and planning were carried out by public institutions including the Bogotá Mayor's office, the Urban Development Institute (IDU), the District Institute of Culture and Tourism, the Secretary for Transportation and Traffic, the Department of Planning, the Secretary of Finance, and the state-owned enterprise, *Metrovivienda*[9]. The IDU was placed in charge of building and maintaining the infrastructure necessary to operate the BRT system.

There has been some criticism of TransMilenio over the past 18 years, mainly in relation to congestion and safety issues. In response, in 2016, TransMilenio and its concessionaires jointly developed a model of social responsibility and sustainability, promoting civility, empathy, tolerance and solidarity among passengers and citizens. As such, TransMilenio has broadened its original mandate to include a social inclusivity agenda, and specialised teams have been created to address outstanding barriers to inclusion.

For the purpose of this case study, the Action Areas identified are **Stakeholder Identification, Engagement and Empowerment, Governance and Capacity Building, Policy, Regulation and Standards,** and **Private Sector Roles and Participation.** The focus is on Practices that enhance the experience for people with disabilities and impaired mobility, women, homeless and informal vendors. Other relevant Action Areas include Project Planning Development and Delivery, and Affordability and Optimising Finance, however these will not be analysed in detail in this case study.

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4   In June 2018, there are 3,568 buses with less than 10 years of deployment, ranging from large bi-articulated buses (240-passenger capacity) to minibuses (19-passenger capacity).

5   Maximum speed achieved in selected sections of the main routes in 2017. The average speed is 25 kilometres per hour.

6   From June 2017 to June 2018, TransMilenio reported an average daily ridership demand of 2,330,000 passengers during weekdays and 250,000 passengers per hour during peak hours.

7   TransMilenio carries more than 400,000 passengers per direction per hour during peak hours, close to the operational carrying capacity of a low capacity metro.

8   The BRT Corridor Standard includes five best practices: service planning; infrastructure; station design and station-bus interface; quality of service and passenger information systems; and integration and access. It was conceived by the Institute for Transportation and Development Policy (ITDP) in 2012. The ITDP is a non-governmental non-profit organisation that focuses on developing BRT systems, promoting biking, walking, and non-motorised transport, and improving private bus operators' margins.

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9   Bogotá's State-Owned Enterprise (SOE) for the construction and acquisition of social housing assets.

Key Practices Identified and Applied

STAKEHOLDER IDENTIFICATION, ENGAGEMENT AND EMPOWERMENT

How inclusivity has been addressed

The identified practices include regular disaggregated data collection to identify vulnerable stakeholder groups and monitor project implementation as it relates to these groups, a dedicated stakeholder communications team and an innovative program to empower stakeholders to confidently use the BRT system.

Implementation

Data collection

For the past 10 years, the Chamber of Commerce of Bogotá has been conducting semi-annual surveys[10] on the public's perception of the transport system, and the findings show that, in general, people's view of the level of safety has always been low. In 2014, Bogotá ranked the worst amongst 16 cities surveyed with the most dangerous transport systems for women[11]. In a parallel survey by the Observatory on Women and Gender Equity of the Secretariat of Women, 75% of the women said they had been victims of sexual harassment in the most recent month and 48% felt fearful when entering the BRT system[12].

During the development of the second phase of TransMilenio BRT, new routes were identified to reach some of the low-income neighbourhoods on the edge of the city. They were identified according to the income levels (known as strata) recorded in the SISBÉN[13] database. The project focused on Strata 1 and 2 - the lowest income areas.

Stakeholder engagement

As outlined in detail in the Governance and Capacity building section, a dedicated communications team was established to focus on inclusivity. It manages stakeholder engagement based on the agreed objective of improving social inclusivity for the most vulnerable groups, such as women, people with disabilities, the homeless and informal street vendors.

Simulation centre for TransMilenio BRT System

In 2017, in a cross-governmental agreement with TransMilenio, an innovative pilot program to support people with disabilities was created. A simulation centre was established to help passengers experience boarding, alighting, transferring and moving through the TransMilenio BRT system in a safe, inclusive and stress-free environment. The program hopes to empower people with disabilities so they can use the BRT system on their own and familiarise themselves with the support services available.

People can take a virtual tour of the facilities in the stations and see several different models of buses for passengers with different types of disabilities. The centre is also used as a social space and inclusivity workshops are held to improve awareness of people's needs.
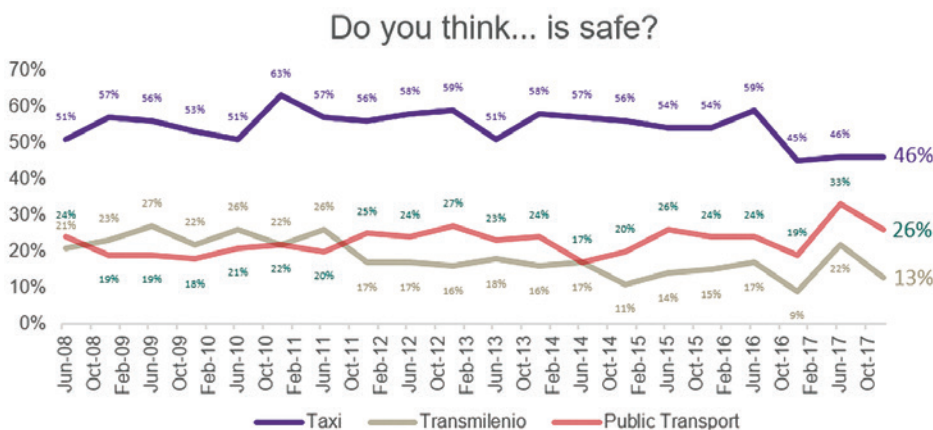

Figure 1. Percentage of the surveyed citizens who think it is safe to travel in taxis, TransMilenio or the Public Transit System except the BRT system.

Source: Historical data from the Survey on Perception of Safety and Victimisation in Bogotá.

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10   Perception of Safety and Victimisation Survey in Bogotá, (Chamber of Commerce of Bogota, 2018)

11   Bogotá mayor defends programme for women's safety on buses, (Moloney, 2014)

12   Women Travel Safe in Transmilenio, (District Secretariat of Women, 2014)

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13   Identification System of Potential Beneficiaries of Social Programmes or *Sistema de Identificación de Potenciales Beneficiarios de Programas Sociales* (SISBÉN) in Spanish. The system identifies and categorises low-income citizens to allow them access to public aid services.

GOVERNANCE AND CAPACITY BUILDING

Statement of the issue in relation to inclusion and brief introduction

Prior to the introduction of TransMilenio, Bogotá's public transport system was inefficient and underutilised, and therefore, by default, the use of private vehicles was encouraged. In 1999, more than 850,000 private vehicles used 95% of the road network and carried about 19% of Bogotá's population[14]. Most of the public transport operators were informal and private companies competed fiercely for riders, often compromising people's safety and health. In the year before TransMilenio was introduced, there were 52,764 accidents and 1,174 deaths related to traffic incidents, according to the city's reports. Most people relied on these private and low-quality services during their daily commute to jobs and services. There were no dedicated facilities for people with disabilities or impaired mobility.

In addition, decades of civil conflict exposed people to displacement, unrest and violence. From the 1970s to the 2000s, people moved from rural areas to the outskirts of urban areas due to political and social unease. It is estimated that two-thirds of the Colombian population living below the poverty line now live on the edge of urban areas[15]. Connections to these low-income neighbourhoods were poor, particularly at night time. People with disabilities or impaired mobility struggled to access transport services at all. Women were vulnerable in the crowded, disorganised and unsafe environment and elderly passengers were neglected.

Communication barriers appeared during the construction phase, when the works caused major disruption throughout the city; and during operations, because the BRT system was perceived by the community to be of low-quality, particularly in relation to congestion and safety. These issues resulted in a need to improve people's perception of the system and develop a distinctive image through extensive media campaigns, workshops and targeted engagements.

Attitudinal barriers such as prejudice, discrimination, stigmas and low tolerance of vulnerable groups are often observed during the day-to-day running of this busy public transport system. Improving some people's attitudes toward vulnerable groups has been a priority in more recent years. Interventions have focused on the operational workforce and users, to improve their support and empathy towards women, people with disabilities and the elderly.

Negative attitudes towards other users such as informal vendors and homeless people (who use bus stops as shelters) have also been addressed in recent years in line with wider national- and district-level legislation and policies.

How inclusivity has been addressed

> The identified practices are the establishment of a Manual of Social Management which sets out specific guidelines to implement inclusive infrastructure in Bogotá, and a stakeholder communications team to focus solely on promoting inclusivity through awareness campaigns and education.

In 2016, TransMilenio worked with Bogotá City Hall to develop a prescriptive Manual of Social Management[16], which is updated annually and sets out guidelines for the implementation of intervention strategies, and describes the principles, stages of planning, organisation, execution and document control requirements, as well as the procedures that support them. A team of experts was employed to carry out TransMilenio's social management intervention strategies and engage directly with communities, operators, institutions and target groups.

There have been ongoing reviews and an evaluation of ways to improve accessibility for all citizens throughout the operation of the BRT system. However, since 2016, these reviews have been consolidated, following the establishment of the dedicated team of experts within Transmilenio's social management[17] team and communications team[18]. Implementing TransMilenio's social inclusivity agenda has involved collaboration among many stakeholders, from concessionaires, contractors, designers and operators to all members of society, supported with specific inclusivity policy, communications programs and monitoring.

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14 Bogotá, Colombia Bus Rapid Transit Project – Transmilenio: Case Study (United Nations Development Programme, 2008).

15 Ibid.

16 In Spanish, *Manual de Gestión Social.* Created in 2016, the manual is updated annually.

17 In Spanish, *Gestión Social*

18 In Spanish, *Subgerencia de Comunicaciones y Atención al Usuario.*

Implementation

Institutional Collaboration

The design of the system was overseen by TransMilenio S.A. and was based on inter-agency collaboration, including the Bogotá Mayor's office, the Fund for Education and Road Safety of the Secretary of Transit and Transportation (FONDATT), the IDU, the District Institute of Culture and Tourism, the Secretary for Transportation and Traffic, the Department of Planning, the Secretary of Finance, and *Metrovivienda*.

A dedicated communications team to focus on inclusivity

The communications team is responsible for implementing the communications strategy to promote social inclusivity. It manages stakeholder engagement based on the agreed objective of improving social inclusivity for the most vulnerable groups, such as women, people with disabilities, the homeless and informal street vendors. The activities of this office include:

- communication campaigns to promote social inclusivity on specific commemorative dates[19] through public campaigns and social media platforms;

- staff training programs on gender equity and anti-discrimination;

- workshops for operators on social inclusivity and anti-discrimination;

- inserting public policy for gender equity into TransMilenio's institutional policy, strategy, operations, and support;

- working with the Institute for Social Economy (IPES)[20] to implement a framework that helps informal vendors in the TransMilenio network move towards socially responsible alternatives for income generation (see Program for informal vendors section); and

- coordination with the Secretary of Mobility Development[21] to support workshops for operators and agents on services for passengers with disabilities.

Figure 2. Priority groups for TransMilenio's social inclusivity interventions in 2017

Public campaign to raise awareness

In October 2017, the City of Bogotá and TransMilenio launched a campaign to promote social inclusivity for people with disabilities, and specifically, people with a visual impairment and people with mobility issues. The messages "I move with Braille"[22] and "TransMilenio moves for everyone"[23] were shared via social and traditional media, and at public events and workshops. The campaign aimed to:

- educate people about the use of Braille across the city's public transport system;

- explain the importance of Braille;

- reduce vandalism and damage to Braille signage across the network;

- inform travellers of the tools available to them if they have a visual impairment;

- communicate the value of all the available services, fare concessions and infrastructure for passengers with disabilities; and

- promote proper civil behaviour and empathy toward people with disabilities.

Training for staff and operators

TransMilenio has supported several inter-agency training workshops for employees and operators to improve service quality, including putting trained staff in every station so they can help passengers with disabilities. In 2017, TransMilenio trained 11,200 staff members and 12 operators in the BRT system.

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[19] International Day of Women's Rights, Day of Social Responsibility in Bogotá, Equity Week, Month for People with Disabilities and the International Day for the Elimination of Violence Against Women.

[20] *Instituto para la Economía Social* (IPES), Bogotá's Government Office in charge of providing the informal economic activities of its citizens with formal and productive alternatives of income generation.

[21] *Secretaría Distrital de Movilidad* (SDM), City Government's Office responsible for master planning, design, coordination, execution and evaluation of the city's transport strategies.
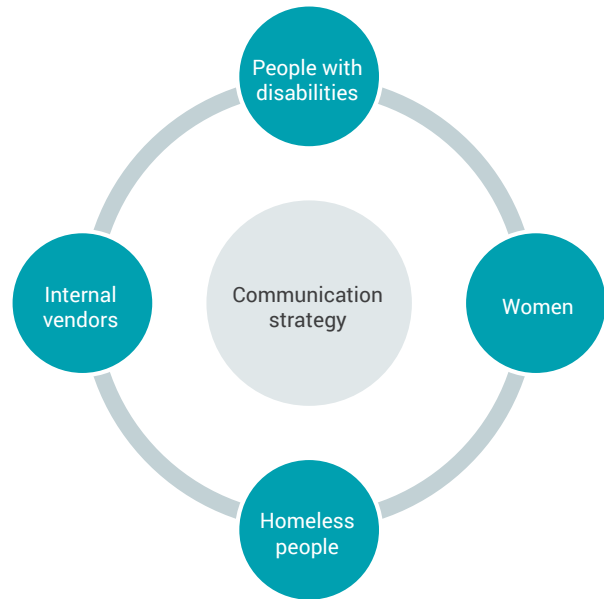
[22] *Me Mobilizo con Braille* in Spanish

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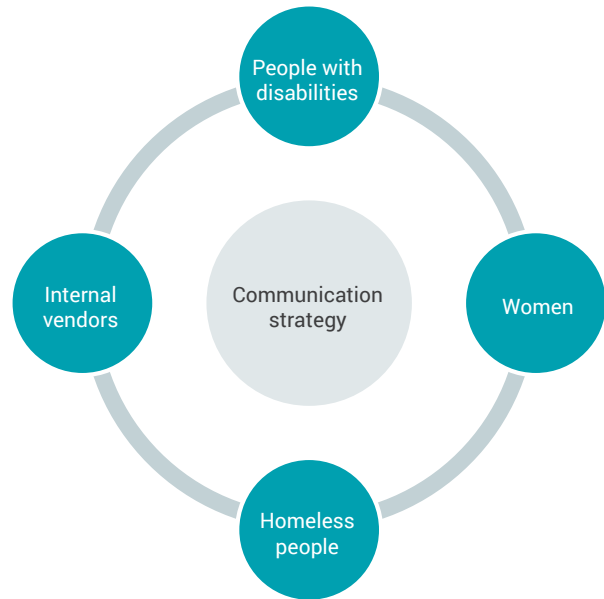
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[23] *Transmilenio se Mueve para Todos* in Spanish

Practical advice for the public

A guide for helping people with disabilities or reduced mobility has been developed and is available on the TransMilenio website[24]. It provides practical advice on how to correctly address people with disabilities or reduced mobility in a civil and inclusive manner. It relates to people with:

- hearing disabilities;
- cognitive and mental disabilities;
- motor disabilities and reduced mobility;
- visual disabilities; and
- people with a guide dog.

If you talk to a person with a hearing impairment, you may communicate through sign language or lip - facial reading

Speak slowly but without exaggerating your verbal expression, so that it is understandable. If you do not achieve successful communication, go to the citizen's attention guides.

Figure 3. Example of the guide for people with hearing disabilities

Collaboration with Bogotá City's Secretariat of Women

TransMilenio works with the Secretariat of Women at Bogotá's City Council to implement its Gender Equity Plan, which increases people's awareness of the challenges faced by women in Bogotá. This inter-agency collaboration aims to guarantee safe travel for women in Bogotá. It focuses on two areas in particular: gender stereotypes and stopping violence against women. Workshops and media campaigns were run to question the social roles that have been assigned to women and men, and explore how this leads to inequality.

Gender equity initiatives

Within TransMilenio, several initiatives have been implemented to improve safety for female passengers and promote equity for women working on the network. Awareness campaigns have focused on reducing violence against women, the number of security guards on the system has been increased, surveillance cameras have been installed and extra training has been provided for staff members.

Specific actions implemented in 2018 include:

- the process for passengers to report sexual harassment within TransMilenio's facilities was revised;
- objectives were defined for the terms of reference of

the Transport Gender Lab[25] for the Inter-American Development Bank (IADB);

- clauses to guarantee women's rights and promote gender equity have been incorporated in the terms of reference for Phase I of the new cable car system planned for Bogotá;
- internal and external communication campaigns to promote gender equity;
- technical assistance for the Secretariat of Women to run workshops for operators on gender equity, safety and anti-discrimination; and
- participation in the 2018 Ranking of Equity and Gender[26].

In 2019, TransMilenio will implement its new Gender Equity and Inclusion Policy, which will set out specific measures to be implemented within the public transport system (that is, on the BRT, SITP and on TransMicable, the new cable car network that is planned for Bogotá).

Increasing affordability for vulnerable groups

Lower fares are available for the following groups:

- the elderly (people over 62 years old);
- people with disabilities - TransMilenio provides a 40% monthly discount off the maximum fare over 25 journeys; and
- BRT users with the SISBÉN incentive card – this is a benefit directed at people from low-income neighbourhoods as recorded in the SISBÉN database and recognises that these passengers may need to use several feeder services to reach the main trunk network.

Program for informal vendors

An inter-agency agreement was developed by the Institute for Social Economy (IPES) of Bogotá City Council and TransMilenio. Under this agreement, elderly vendors and vendors with disabilities are allowed to sell a pre-approved list of goods in designated areas within the stations. The program aims to create small business opportunities for the vendors and enable them to generate income for themselves and/or their immediate family members.

It is currently being run as a pilot scheme. The impact of this business model on the BRT system, its passengers and on the small business vendors will be evaluated before its possible introduction.

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24 Please refer to website; http://www.transmilenio.gov.co/Publicaciones/ GUÃKA

25 Seven cities across Central and South America including Bogotá (Colombia), Buenos Aires (Argentina), Mexico City (Mexico), the State of Jalisco (Mexico), Guatemala City (Guatemala), Quito (Ecuador) and Santiago (Chile) are part of this initiative that seeks to generate a network of knowledge on the design and implementation of policies and initiatives that support gender equality and inclusion in transportation systems. The network of cities works specifically to promote the adaptation of infrastructure relative to urban transport systems according to the specific needs of women.

26 In Spanish, Ranking *PAR de Equidad de Género en las Organisaciones* 2018. An independent evaluation and ranking of gender equity in organisations in Colombia and Peru.

Initiatives addressing homelessness

TransMilenio participated in the development of the Public Policy on Homelessness, prepared by Bogotá City Hall, and supported the interventions organised by its Secretariat of Social Integration (SDIS)[27] to identify and address the factors that contribute to homelessness. TransMilenio's communication managers worked with 312 people who were seeking shelter in its facilities to help them understand how to interact with passengers appropriately. The BRT operator also collaborated with Bogotá's law enforcement officials to find them alternative accommodation in local refuges.

As a result of the initiatives, passengers reported feeling more secure in their engagement with homeless citizens at stations across the network. Their level of concern decreased from 45% in 2016 to 34% in 2017[28].

Supervision and monitoring

Annual *Cómo Vamos* [How are we?] citizen surveys were carried out in Bogotá between 1998 and 2014 and were used to measure satisfaction with TransMilenio in the early years of its operation. The survey is an evaluation tool based on public perception indicators designed for different areas across the city. It was generic in nature and related to travel times and use. However, it did not target any specific potentially vulnerable group. It reported perception indicators including public space and public service provision (electricity, water, sewage, etc.). The survey also covered mobility and several questions related to the perceived performance of public transport in general.

The TransMilenio management team is supervised and monitored by several public offices and non-governmental organisations. Management reports are publicly available from 2010, including traffic statistics and service levels. Results are published on the TransMilenio website, along with clear guidelines regarding its social inclusion programs and activities. Social inclusivity reporting is included in TransMilenio's annual reports with details of all programs, events, plans and results, and reports are published on its website.

In 2017, the TransMilenio communications team published a general report on its social inclusivity program, which is also publicly available on its website. Governance, internal control and monitoring mechanisms are described in the Manual of Social Management with details on the list of events and social inclusion interventions. The communications team, along with a team of specialised social management staff[29], controls and monitors TransMilenio's social inclusivity program with weekly follow-up meetings to ensure compliance.

POLICY, REGULATION AND STANDARDS

Statement of the issue in relation to inclusion and brief introduction

In 1996, the Colombian government created the National Urban Transportation Program[30], supported by IBRD financing. The Program centred its strategy on the development of BRT systems and TransMilenio was proposed as part of this plan.

The project had strong political support, driven by the Mayor of Bogotá, Enrique Peñalosa, and was developed through alignment and consistency with several government policies and programs, including the Bogotá Ten-year Spatial Plan[31] and the Comprehensive Neighbourhood Upgrading Program[32].

How inclusivity has been addressed

> The identified practices are an inclusive approach to governance and the early development of a comprehensive set of inclusive design and planning standards.

An inclusive approach to governance was developed from the outset and became the backbone of the project design. This covered specific objectives to respect diversity and create a transport system that could be accessed by all. It recognised the need to engage low-income residents by providing a route into the city centre, and to design the system so people with disabilities or reduced mobility were able to access public transport.

These objectives were translated into a comprehensive set of project design standards, drawing on national and international design benchmarks and guidelines, and lessons learned from similar projects. TransMilenio's approach was based on the ISO 26000:2010 Guidance on Social Responsibility with emphasis on the fundamental principal of "active participation and engagement of the community". In line with project objectives, the standards incorporated the concept of Universal Design. It includes several achievable principles in its governance practices, such as transparency, environmentally-friendly infrastructure and service for passengers with disabilities, women and the elderly.

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[27] *Secretaría de Integración Social*, government office created to assist the homeless and displaced citizens of Bogotá.

[28] Social Responsibility report for TransMilenio, (Transmilenio S.A., 2018b).

[29] In Spanish, *Profesional Especializado de Gestión Social*.

[30] In Spanish, *Programa Nacional de Transporte Urbano*.

[31] *Plan de Ordenamiento Territorial* in Spanish

[32] *Programa de Mejoramiento Integral de Barrios (PMIB)* in Spanish

Implementation

Policy creation to ensure inclusivity for citizens

The Government of Colombia and the City Council of Bogotá have been progressive in addressing inclusivity in their laws, regulations and policy. The policies mostly focus on accessibility for people with disabilities and gender equity.

As early as 1997, the challenges faced by people with disabilities were recognised and a legal framework that required all transport operators to ensure their services were accessible[33] was developed.

Following the construction of the first phase of TransMilenio in 1998, other legislation and policies have been passed at the national and district levels to strengthen inclusivity within infrastructure. At the city level, the City Council of Bogotá ordered a decree[34] in 2007 to adopt the Public Policy for Disability for the Capital, and specifically proposed that infrastructure be people-oriented to ensure accessibility for people with limited mobility.

The Social Responsibility Agreement 494, 2012 was passed by the City Council of Bogotá to promote social responsibility. The Agreement dictates that TransMilenio must implement certain events and actions. Additionally, it requires monitoring and reporting of TransMilenio's social impact activities.

In 2013, the National Planning Department of Colombia recognised that universal accessibility and social inclusion should be included in its national policy[35] for public works and infrastructure. In that same year, guarantees for universal access were addressed in the Sanctuary Law[36], which gives people with disabilities certain rights to public transport, and sets a target of 80% of total accessibility within 10 years.

Regulatory framework for gender equity in transport

Gender equity in the transport sector is supported by a comprehensive regulatory framework. Colombia ranks quite highly in the Americas on gender equity, ranking in the top 25th percentile in gender equity in 2017[37].

The Constitution confirms the state is obliged to promote conditions for real and effective equity[38]. Furthermore, gender equity is supported by laws, decrees, resolutions,

judgements and agreements[39]. The strong regulatory framework has been reflected in the development of TransMilenio's Manual of Social Management and Gender Equity and Inclusion Policy 2018[40], which implements guidelines, practices and performance metrics to address three identified challenges: violence against women, inequalities in the workforce and low representation of women at the operational level.

Priority boarding and alighting zones for passengers with special needs

In 2018, a priority boarding program was introduced at the busiest station, The Americas Station[41]. A designated priority boarding area was reserved on the platforms and additional staff are available to help passengers get on and off the bus safely. The program aims to lower disruption, and reduce accidents and criminal acts against people with special needs during peak hours.

Supervision and monitoring

Since 2016, TransMilenio has provided monthly traffic statistics to different government secretaries for analysis and to support the formulation of policies. They cover demand, supply and the profile of passengers.

In addition to the social challenges detailed above and despite strong political support, the project encountered several other barriers to inclusivity. In the feeder systems, standards for accessibility were not fully met and several planned designs were not implemented. There were also incidences where, due to constraints (e.g. project budgeting and timeline) and a lack of shared vision between the contractors and the operator, the intention during design was not carried through to construction by the contractors. As result, non-compliance had to be addressed.

Throughout its operation, opportunities to address outstanding physical barriers have been identified, such as making it easier for people with other disabilities (e.g. audio or visual), the elderly, and women with young children. Lowering the physical barriers has required continuous effort by TransMilenio.

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[33] Article 59, Law 361, 1997, Colombia

[34] Decree 470, 2007, Bogotá

[35] National Public Policy regarding Disability and Social Inclusion, (Correa-Montoya & Castro-Martínez, 2016)

[36] Article 14, Sanctuary Law 1618, 2013.

[37] Colombia ranks 36th of 144 countries for gender equality in 2017 in the World Economic Forum's report.

[38] Articles 13, 42, 43 of Colombia's Constitution.

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[39] Law 22 in 1967: anti-discrimination at work; Law 51 in 1981: elimination of discrimination against women; Agreement 091 in 2003: Bogotá's Plan of Equal Opportunities for Women; Judgement C-804 in 2006: usage of inclusive language; Decree 160 in 2010: gender equity in politics, plans, programs and public projects; Resolution 489 in 2015: structure to implement gender equality at workplace.

[40] The new policy covers all the operators within the TransMilenio system and will be applicable in 2019 after management review and approval.

[41] Located in the south-west of the city, The Americas Station is the main station for the feeder routes from Bosa, one of the poorest districts in Bogotá. It has the largest percentage of elderly passengers and people with disabilities registered in the BRT system. During peak hours, the platforms are overcrowded and passengers board the buses in a disorganised and sometimes violent way, often causing disruptions or accidents and leading to criminal activity. Passengers with special requirements are at risk and struggle to board the buses in these circumstances.

PRIVATE SECTOR ROLES AND PARTICIPATION

How inclusivity has been addressed

> The identified practice is incorporating and maximising inclusivity benefits through private sector design requirements and contractual obligations.

Implementation

Contractual obligations

Design requirements are communicated to contractors, who are obliged, through their contracts, to ensure everyone can access TransMilenio's facilities and services and that this intention is reflected throughout their work, from the original design to the final installation. They were also required to conduct a comprehensive audit to maintain the system's service levels.

As part of TransMilenio's ongoing improvements to address the physical barriers, it has incorporated:

- standardised station design;
- preferential access and appropriate signalling for passengers with a visual impairment;
- audio devices to announce the opening and closing of gates;
- physical barriers on the platforms to warn users of the potential for falls;
- hand rails to assist passengers when they are on the bridges and in stations;
- bridges, elevators and ramps to improve accessibility;
- wheelchair access for passengers with disabilities, and extra space for pregnant women, young children and the elderly;
- elevated stations to help passengers with wheelchairs easily board and alight from the buses;
- buses on the feeder routes equipped with mechanical ramps to help passengers in wheelchairs get on and off the vehicles;
- assigned priority seats in the buses and dedicated space for wheelchairs; and
- special payment cards in Braille and audio devices to inform and alert visually impaired passengers.

Currently TransMilenio, through inter-agency cooperation with IDU, is investigating the use of cable cars (with wheelchair access) to help people living in elevated areas on the outskirts of the city where there is a higher concentration of people with disabilities. Disaggregated data from the Health Secretariat is being used to identify these sites. Several pilot studies have been initiated prior to full scale roll-out.

Benefits Realisation

In relation to this case study, the following benefits have been identified. However, it should be noted that quantitative results from TransMilenio's more recent social inclusion activities have yet to be reported.

Identified benefit	Benefit description
Social equity and social stability	Increasing public awareness and empathy towards vulnerable groups of people helps to lower incidents of vandalism and crime, improves safety and service quality, and increases the number of passengers using the system. People's general perception of safety improved 5% in 2017[*1].
	Improved access for people with disabilities – TransMilenio was the first public transport system in Bogotá available to the identified target groups.
	Improved connectivity between low-income neighbourhoods and the city centre, with an increase in accessibility for 14 of the poorest boroughs (known as zoning planning units, or UPZs).
Increasing affordability and accessibility	Travel times were reduced, improving citizens' quality of life. Travel time decreased by 25% along TransMilenio's Avenue Suba BRT corridor in 2008. Overall, the average travel time for passengers reduced from 48 to 31 minutes[*2]. This improvement and the new routes provided have increased access to employment, education, health, economic and social opportunities.
	Lower tariffs for people with disabilities, the elderly and low-income groups. A special card is used that provides a 40% monthly discount off the maximum fare over 25 journeys. In addition, people registered on social welfare also receive a 25% discount on a maximum of 30 journeys per month.
Increasing gender equity	Improving safety for women in transit and encouraging passengers to denounce criminal acts against women within the stations.
	Increasing people's awareness regarding women's rights and equity at work.
Integration of small business opportunities	Pilot project that integrates and legalises the activities of elderly and disabled informal street vendors within TransMilenio's small business program to provide them with sources of sustainable income.

[*1]   Survey by the Chamber of Commerce of Bogotá in 2017, 78% of surveyed citizens reported feeling unsafe when using the public transit system in comparison to 83% in 2016.

[*2]   IEG ICR Review (2015), Report Number ICRR14775

Stakeholders

Key beneficiaries	Role
People with disabilities	People with additional requirements, for example, mobility challenges or visual impairments, who are accessing and transiting within the BRT system are considered in the infrastructure and related services.
Women	The safety of female passengers and gender equity in the workforce are top priorities in TransMilenio's social inclusivity strategy and practices.
Informal vendors	Small and informal vendors selling services and goods within the BRT installations are relocated in collaboration with law enforcement. A pilot program to offer the most vulnerable vendors an opportunity to legally operate in TransMilenio was introduced.
People facing homelessness	People who are not transiting through the BRT system but use the facilities for long periods of time are moved to shelters and other accommodation.
Staff	Staff in management and operations at TransMilenio and other BRT operators receive training to provide services to vulnerable groups. They also receive training on gender equity at work.
All users	All BRT users have a role in understanding the needs of others, e.g. people with disabilities. All users are targeted for media and education campaigns.

Institutional stakeholders and partners	Role
Secretaries	Bogotá's public institutions directly involved in designing and implementing social inclusivity programs, policies and guidelines along with TransMilenio.
Mayor's office	Regulators of TransMilenio – primarily through the transit and transport secretariat.
Ministry of Transport	Regulators of TransMilenio – in charge of national policies and plans.
TransMilenio S.A.	A public-private partnership, comprised of regulators, managers and operators of the system.
The *Instituto de Desarrollo Urbano* [the Institute of Urban Development] (IDU)	Responsible for building and maintaining the infrastructure, which includes bus lanes, terminals, parking and maintenance yards, as well as pedestrian overpasses, plazas and footpaths.
Contractors	Legal entities procured to provide design, engineering, construction and maintenance works. They are also required to meet TransMilenio's social inclusivity standards.
Operators	Firms and companies operating the buses or other services for TransMilenio. They are engaged to deliver inclusive services and practices.
NGOs	Other organisations engaged to collaborate, participate and assist TransMilenio in its inclusivity work.
Multilateral institutions	World Bank (IBRD), and IADB, which provided supporting funds and expertise.

Lessons Learned

Success factors

Institutional and regulatory intervention, inter-agency cooperation and enforcement policies. Alignment with other plans and programs resulted in early political support for the project.

Transparent governance. TransMilenio's management team set clear direction for the roles and responsibilities of the firm, its employees and the operators of the BRT system. The Manual of Social Management outlines TransMilenio's social inclusivity strategy to ensure all programs and applications are implemented, managed, monitored and reported.

Inter-agency collaboration between international and local public institutions helped to implement social inclusivity across the city and scale-up the reach and impact of their programs and activities.

Public consultations and participatory planning foster community ownership that is essential for the sustainability of the investment.

A dedicated team of professionals to implement an inclusivity strategy, engage with different stakeholders and perform monitoring and reporting. The communications team and the social management team work exclusively on implementing TransMilenio's social management strategy and they serve as the first point of contact for the community.

Key challenges

Transforming public perception in relation to vulnerable groups is a constant challenge for TransMilenio. The provision of infrastructure to assist vulnerable groups alone is not sufficient if other users do not respect the spaces designed for these groups. There is a constant challenge for all parties to be united and socially inclusive. This is an evolutionary process that can only be achieved through communication and awareness.

Long- and short-term expectations. Social inclusivity is a tool but not a solution to all of society's problems. Milestones set during the implementation phase of inclusivity works require constant adjustment. As such, actions and goals tend to be dynamic rather than quantitative and short-term.

Incorporating inclusivity and accessibility into the technical components of future projects requires strong engagement with different stakeholders, operators, contractors and designers to identify innovative ways of improving accessibility and inclusivity. Clear governance, supervision and enforcement need to be common practice. Pilot projects have been used in some instances to identify best practices that work during full-scale implementation.

Figure 5: Disabled passenger using TransMilenio bus,
Source: TransMilenio Brochure (https://www.transmilenio.gov.co/)

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