Building Better Public Transport Systems

PUBLIC TRANSPORT PRINCIPLES BRIEF

ITDP

AUTHORS AND ACKNOWLEDGMENTS

AUTHOR
Beatriz G. Rodrigues

CONTRIBUTING AUTHORS
Aimee Gauthier
Dana Yanocha
Jay Chatterjee
Mackenzie Allan
Stanford Turner
Yijing Mao

EDITING, REVIEW, AND ADDITIONAL SUPPORT WAS PROVIDED BY ITDP STAFF:
Aline Leite
Bernardo Baranda
Jacob Mason
Lorena Freitas
Zheng Yuetong

PICTURE
Curitiba's transit system was designed as an integrated, hierarchical network to address current and future demand, guide growth in conjunction with land-use policies, ease commuter life, and provide a clear identity, reliability, and high operational performance.
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INTRODUCTION

1

Public transport is a vital part of cities, connecting people to jobs, education, healthcare, and other opportunities. In most cities around the world, public transport—both formal and informal—accounts for the majority of motorized trips, from 40% to 70%. In the United States, where transit accounts for just 10% to 20% of daily travel (ITDP, 2024), studies still show high economic returns on investment, with every $1 spent on transit generating approximately $5 in broader economic benefits (American Public Transportation Association, 2020). By providing publicly available passenger service that most commonly operates with fixed routes and schedules, public transport offers an efficient way to move large numbers of people through dense cities while using minimal space. More than just a mobility solution, it is a foundation for economic development, social inclusion and environmental sustainability. Further, public transport reduces CO_2 emissions by up to 45% per passenger-km compared to private vehicles (C40 Cities, 2021). **In well-planned cities, public transport supported by walking and cycling enables vibrant, compact, and connected urban areas, making them more livable and efficient for all.**

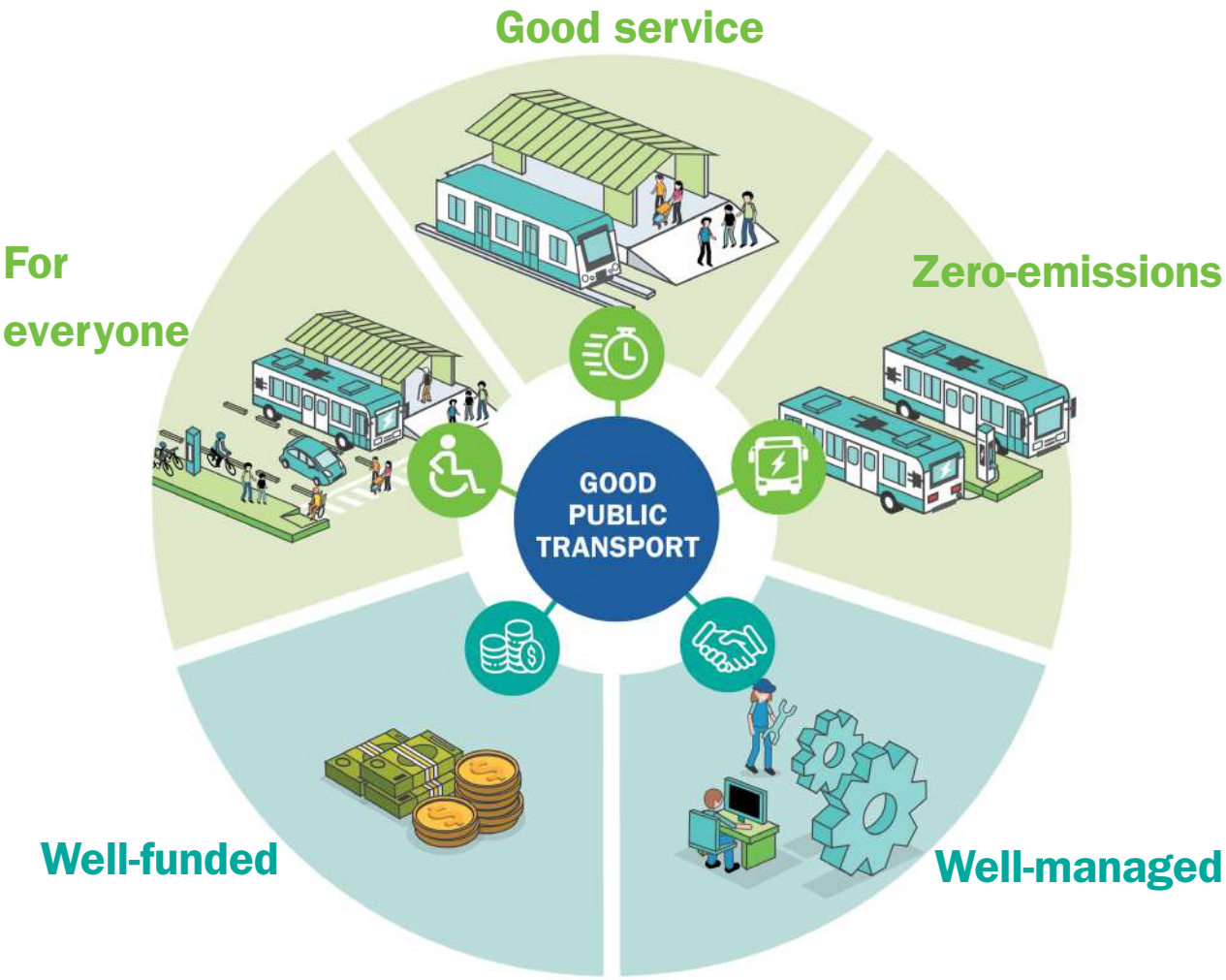
Despite its benefits, public transport has faced increasing challenges in recent years. Ridership has declined in many places, with some cities experiencing reductions of 26% post-pandemic (Berrebi, S., et al., 2024). Infrastructure investments remain insufficient, with a global funding gap estimated at $15 trillion by 2040 (Oxford Economics, 2017). Additionally, in some regions, service quality has not kept pace with growing urban needs, leading to increased reliance on private vehicles and worsening traffic congestion. Projections indicate that urban passenger transport demand will more than double by 2050, intensifying existing issues (World Bank, 2024). The current scenario presents a crucial opportunity to rethink and strengthen public

Like many large cities around the world, New Delhi has a public transport system that includes both formal and informal modes.
SOURCE: cameranest via Shutterstock

transport systems worldwide. Addressing these gaps requires increased funding, strategic partnerships and global knowledge-sharing to ensure that both well-established and fast-growing cities can build resilient, adaptable, and high-quality public transport networks.

This publication presents the **Public Transport Principles**—a shared framework to guide governments, planners, and advocates in designing public transport systems that deliver **good service, with zero-emissions vehicles for everyone**, grounded in **well-managed institutions and well-funded operations**. These five principles define what makes good public transport services effective, equitable, and transformative and how to achieve them. In a moment when cities face mounting pressure to improve access, reduce emissions, and support inclusive economic growth, there is an urgent need for clear guidance.

Rather than prescribing one-size-fits-all solutions, this paper offers adaptable principles grounded in global experience. It can be used to inform policy development, align stakeholder efforts, and support more consistent evaluation of what constitutes "good public transport." Ultimately, it aims to empower cities to make strategic, long-term improvements that deliver lasting benefits to people and the planet.



WHAT IS PUBLIC TRANSPORT?

2

Public transport is essential to urban life. It is a shared service, open to everyone, that operates on regular schedules and usually follows defined routes. Public transport enables people—regardless of whether they own or can operate a vehicle—to move freely and access the opportunities their city offers. For a service to be considered public transport, it typically meets the following criteria:

- It is **publicly available** to all users without restriction.
- It provides a **shared service** designed to carry multiple passengers, generally seven or more per vehicle, distinguishing it from small-scale or individual services.
- It operates mostly **along fixed routes** within urban areas, which excludes intercity or long-distance modes such as airplanes.
- It provides **predictable and consistent** service, offering regular schedules and stops.

Public transport systems differ significantly in their form, infrastructure, and operations. They may be road-based, rail-based, water-based, or aerial and can differ in speed, frequency, priority in the street network and fare collection methods. Some operate in mixed traffic, while others benefit from dedicated lanes or fully grade-separated corridors. Fare collection mechanisms can vary as well, from preboarding fare collection integrated with smart cards or mobile apps to onboard cash payments.

On Car Free Day in Jakarta, certain areas of the city are completely blocked off to cars and motorcycles.
SOURCE: wibisono.ari via Shutterstock.

Table 1. Overview of commonly used public transport modes and characteristics.

Mode	Description	Infrastructure Type	Operational Features	Typical Applications
Aerial Transit	Cable cars and gondolas running above ground.	Cable lines with elevated stations	Moderate capacity, slow speed, scenica and practical uses.	Hilly or mountainous areas with limited ground access.
Bus (from mini to articulated)	Flexible road-based transit running on fixed or semi-fixed routes.	Mixed traffic or dedicated lanes with stops and terminals	Low to moderate capacity, flexible routing, and varied service levels.	Urban and rural areas. Adaptable to various terrains.
Bus Rapid Transit	High-capacity bus system that meets all the Basic elements from the BRT Standard.	Exclusive lanes on streets with enhanced stations and terminals; can also be elevated or underground	Moderate to high capacity, moderate speed, prepaid boarding and level access.	Intra-urban and intercity areas. Medium- to large-capacity corridors.
Light-Rail Transit	Electric rail vehicles on dedicated surface-level or elevated tracks.	Dedicated rail tracks (at-grade or elevated) with defined stations	Moderate capacity, fixed guideway, and moderate speed.	Mid-sized cities or specific medium-demand corridors.
Monorail	Elevated train that runs on a single rail.	Dedicated and elevated beamway with compact stations	Moderate capacity, compact alignment, and moderate to high speed.	Dense urban areas with space constrains for small to medium distances.
Metro	High-speed, high-capacity rail running underground or elevated for medium to long-distance travel.	Fully grade-separated rail network with enclosed stations	High frequency, large-vehicle capacity, fully segregated, with high speed.	Dense urban areas with high passenger demand.
Trains	Heavy rail serving longer distances within or between cities.	Dedicated inter-city rail infrastructure with large terminals	Moderate to high speed, long-distance service, high seating capacity.	Urban and intercity travel connections over long distances.
Ferry	Medium to large boats transporting people across water on set routes.	Navigable waterways with docks or terminals	Moderate capacity, waterfront access, and moderate speed.	Water-connected urban areas and island access.

Beyond physical mode, systems can also be categorized by the type of service they provide. Rapid transit systems are high-capacity services that operate within urban areas and benefit from full or partial right-of-way priority. To be classified as rapid transit, a service must meet design and performance standards that ensure high frequency, fast boarding, and seamless transfers. For BRT, LRT, and monorail, systems needs to be classified as at least Basic according to the BRT Standard. For ferries, subways, and trains, this means operating with a maximum headway of 20 minutes between 6 am and 10 pm, off-board fare collection, and stations spaced less than 5 km apart (excluding waterways).

PARATRANSIT

Another group is paratransit, also referred to as semiformal public transportation, informal public transport, or popular transport. Common across cities in the low- and middle-income countries, paratransit plays a vital role in meeting mobility needs in areas underserved by formal systems. While often lacking centralized planning, fare integration, and regulatory oversight, paratransit offers affordable, adaptable, and demand-responsive transport for millions of daily users. As such, it is a significant part of the broader public transport landscape, particularly in rapidly growing or lower-income urban areas. Given its flexibility and reach, many cities are now exploring ways to better regulate and integrate paratransit into the wider transport network. Recognizing and supporting paratransit is essential to creating a high-quality, integrated public transport network that serves the needs of all residents.

Dala dala minibuses are the primary public transportation system in Tanzania.
SOURCE: chriss73 via Shutterstock.

As cities grow and diversify, public transport systems often combine different modes—rapid transit, local buses, and paratransit—to meet evolving mobility needs. **Regardless of the operational model, all services must strive for accessibility, efficiency, safety, integration, and sustainability.** The next section explores what makes public transport good and effective—and how cities can improve quality and reliability through clear principles and informed action.

WHAT MAKES A GOOD PUBLIC TRANSPORT SYSTEM?

3

High-quality public transport is the backbone of inclusive, resilient, and low-carbon cities. It has the power to radically transform people's daily life and cities worldwide, connecting people to jobs, education, healthcare, and opportunities while improving quality of life and reducing emissions.

As cities globally continue to face growing challenges—from climate change to rising inequalities—it is essential to define what good public transport truly looks like and how collective actions can deliver it and shape its future. In this sense, **good public transport systems main qualities are:**

QUALITIES

Good Service

Frequent, fast, and reliable transport that forms an integrated system that people can depend on every day.

Zero Emission

Fleets powered by clean energy and infrastructure aligned with climate and air-quality goals.

For everyone

Systems that removes physical, social, and economic barriers, enabling all users to travel with safety, dignity, and ease.

Achieving these outcomes doesn't happen by chance—it is the result of deliberate operational strategies and sustained investments. They rely on **strong foundations from systems that are:**

FOUNDATIONS

Well-managed

Built on strong institutions, clear roles, technical expertise, good coordination, and mandates that support planning, oversight, service delivery, and accountability.

Well-funded

Support systems' consistent viability and responsiveness while continuing to expand and remaining affordable to users.

Good service depends on integrated planning, skilled institutions, and efficient operations. Clean fleets require public investment, technical capacity, and long-term strategies, and ensuring that the system works for all demands inclusive governance, equitable fares, and accountability.

Together, these five principles form the building blocks of high-quality public transport—a network that works for everyone, strengthens social and economic inclusion, and supports a thriving city with adaptive capacity to meet the challenges of our time. The next sections explore in more detail what each principle means in practice and offer guidance on how cities are converting these principles into reality.

GOOD SERVICE

QUALITY

Good public transport starts with a good service network. When service is frequent, fast, and reliable, people are more likely to trust the system and use it regularly. These qualities shape the everyday experience of users—determining how long they wait, how easily they transfer, and how quickly they reach their destinations. A well-connected network also plays a central role—when service reaches more areas of the city, people can access more opportunities with less travel time. In many ways, good service is the most visible expression of an effective public transport system and one of the strongest drivers of public satisfaction and mode shift.

Frequent Service

Means that the vehicle arrives at any stop every few minutes consistently throughout the day, including evenings and weekends. This reduces waiting times, makes transfers easier, and helps avoid crowding, and it expands access by enabling people to reach more destinations in less time. Frequent and clear communication about service times makes the system more convenient, especially for those with unpredictable schedules or caregiving responsibilities, eliminating the need to remember when services are available.

Fast Service

Means that public transport vehicles maintain consistent speeds throughout their routes and minimize time lost in traffic, at intersections, or during boarding. This is highly influenced by the level of dedicated infrastructure—such as bus lanes or grade-separated corridors—that allow vehicles to avoid traffic. Fast service lowers overall travel times and increases the number of places people can access within a day—making the system more attractive and responsive to urban life. Speed also plays a key role in making services more cost-effective and scalable.

Reliable Service

Means that vehicles arrive when expected, following regular intervals or published timetables. When reliability is poor, vehicles may cluster together, leading to long gaps and overcrowded trips. With unreliable service, people risk missing connections or being late to appointments. Unreliable service also undermines public trust—even when frequency is high. Real-time data systems, well-designed regulatory frameworks, continuous monitoring, and proper dispatching are essential tools to improve reliability and help agencies respond quickly to disruptions.

Shanghai night bus lines are in operation from 23:00 to 05:30 the next day. **SOURCE:** ruich_whx via Flickr.

Achieving this level of service requires more than technical upgrades—it demands operational strategies, policy support, and continuous adaptation to demand. To carry this out effectively, cities should consider:

- Establishing **dedicated bus lanes** to remove vehicles from traffic and reduce delays
- Implementing **real-time tracking systems** to regularly monitor service quality, understand travel patterns, and guide planning decisions
- Ensuring **level boarding and accessible infrastructure** to reduce dwell time and improve usability
- Promoting **multimodal integration**, coordinating routes, schedules, and fare systems to enable seamless transfers;
- Guaranteeing **updated real-time passenger information** to improve users' experience and perception of the system; and
- Providing **clear, inclusive communication tools** to help users navigate the system with confidence.

These interventions improve not only speed and reliability but also safety, user comfort, and environmental performance. For people with reduced mobility—including older adults, people with disabilities, and those traveling with children—shorter wait times, easier transfers, and level boarding are not just conveniences but necessities. Frequent and reliable service reduces the time spent standing at stops, often in unsafe or poorly lit conditions. Faster travel times and better coordination between modes are especially valuable for caregivers—disproportionately women—who make complex, multi-stop trips for work, school, and household responsibilities.

Dedicated bus lanes, in particular, not only improve travel speed and reliability but also contribute to cleaner air and safer streets. When buses can move freely without being stuck in traffic, they complete trips more quickly and operate more efficiently. For diesel or hybrid fleets, this means lower fuel consumption and fewer harmful pollutants released into the air. For electric buses, it increases battery efficiency and reduces the need for frequent charging. By making public transport faster and more attractive, bus priority lanes also encourage a shift away from private cars—further reducing emissions and creating healthier, more sustainable cities for everyone.

Ultimately, achieving good service requires more than isolated technical upgrades. It depends on systems that are well-managed and well-funded—supported by strong governance, long-term financial commitments, and inclusive institutions. Only when these foundations are in place can cities consistently deliver the kind of high-quality public transport that people need and deserve.

Buenavista BRT Station in Mexico City connects to Metro and Ecobici, and interstate rail service. **SOURCE:** Eduardo Pesado and Diego Alba.

HOW ARE CITIES DELIVERING GOOD SERVICE IN PRACTICE?

Prioritizing street space for buses has been one of the most effective ways to improve travel times and reliability. **In Fortaleza, Brazil**, the city adopted a policy that all roads with more than two lanes per direction must dedicate at least one to public transport. Between 2013 and 2019, the city dramatically expanded its exclusive bus lanes—**from just 3 kilometers to over 111 kilometers in six years**—making buses faster, more consistent, and competitive with private vehicles. This shift also sent a strong signal that public transport is a priority, contributing to mode shift and improved user satisfaction (Fortaleza City, 2019).

Using **real-time data and digital** tools enables more responsive operations and targeted service adjustments. **In Mérida, Mexico**, authorities have leveraged digital tools to enhance service performance and responsiveness. Through GPS tracking, automated passenger counters, and integrated fare systems, the city monitors service in real time and adjusts operations based on actual demand. This increase in fleet efficiency led to a **9% reduction in CO_2 emissions per passenger and an 11% increase in speed while increasing ridership** (Ideamos, 2023).

Improving **travel speed** can transform daily life for millions of urban residents—especially those in low-income areas. **In Dakar, Senegal**, the launch of the city's first all-electric BRT corridor has reduced end-to-end travel time between downtown and Guediawaye **from 90 to 45 minutes**. With the new system expected to serve 300,000 daily passengers, 69% of the city's 4 million residents can now reach the city center in under an hour—up from 57% previously. The operational planning of the BRT demonstrates how better speed and connectivity can enhance equity, efficiency, and climate outcomes (ITDP, 2025b).

These examples show that delivering good service requires a combination of tactical interventions and institutional commitment. Cities that treat public transport as a public good—backed by data, road space, and responsive operations—are building the kind of systems that people can depend on, every day.

Dakar's system incorporates quality inclusive designs along stations and pedestrian facilities, ensuring accessibility for many transit-dependent communities, including women, children, and persons with disabilities.
SOURCE: CETUD.

ZERO-EMISSIONS

QUALITY

Electrification is not just a shift in technology—it is an opportunity to reimagine public transport as a cleaner, more resilient, and more inclusive system. Among the various clean technologies, electrifying buses offer a particularly scalable and cost-effective path to decarbonize urban transport systems. Buses represent the largest share of public transport fleets globally and serve as an entry point for broader system reform. Electric buses can dramatically reduce operating costs, lower noise levels, improves comfort and service quality, and can create new employment opportunities in transport sector. Electrification can also disrupt outdated business models—opening the door to service reform and better integration of paratransit into the formal system. When accompanied by strong policies, integrated planning, and capacity-building, electric bus programs can help improve operations, strengthen institutional frameworks, and lay the groundwork for more equitable public transport networks.

Amman's Bus Rapid Transit (BRT) system prioritized sustainability by using electric buses, resulting in a significant reduction in carbon emissions and an improvement in air quality.
SOURCE: Omar Al-Hyari via Shutterstock.

To fully realize this opportunity, cities must ensure that deployment is supported by robust financing, procurement, and policy frameworks. Public investment plays a central role in scaling clean fleets and infrastructure. Financial incentives, concessional loans, and viability gap funding can help bridge affordability gaps, while training and technical assistance equip agencies and operators for long-term success. Well-designed contracts and institutional support mechanisms—such as workforce development and targeted subsidies—are essential to ensure that the transition benefits all stakeholders and does not reinforce existing inequalities.

These transitions require close coordination between public transport authorities and electricity providers. Ensuring grid readiness, affordable energy tariffs, and smart depot planning are essential to align energy and mobility systems. As electric fleets grow, cities must strengthen their capacity to manage energy demand, implement smart charging solutions, and adapt operations through integrated vehicle scheduling, depot layout, and maintenance protocols.

Finally, inclusive stakeholder engagement—including users, workers, and marginalized communities—must be embedded throughout planning and implementation to build social acceptance and equitable outcomes. This includes advancing gender equity—not only through cleaner air and quieter streets, which benefit caregivers and children disproportionately, but also by creating opportunities to redesign vehicles, stations, and service patterns to better meet the needs of women and gender-diverse users. Transparent monitoring and evaluation systems help track environmental and social impacts, inform adaptive planning, and ensure that electrification efforts contribute to healthier, more just, and more sustainable cities. This and other inclusive and equitable strategies can be seen in the section **For Everyone**.

HOW ARE CITIES PUTTING ZERO-EMISSION TRANSPORT INTO PRACTICE?

Achieving zero-emission public transport requires more than simply replacing diesel vehicles with electric ones. It demands integrated planning that connects vehicle procurement with infrastructure, energy systems, and operational strategy—alongside supportive institutions and long-term policies that lower risks and enable scale.

One important step is developing operational and infrastructure plans that align vehicle needs with local conditions and energy supply. The cities of **Bogotá and Santiago** have taken the lead in planning scalable electrification by adopting **innovative contract models**. Both **rely on a "separated asset" approach**, where public agencies or third parties own the vehicles and private operators are responsible for daily service. In Bogotá, for example, the government manages vehicle procurement and battery replacement while operators are paid per kilometer traveled, ensuring consistent service. Santiago uses a similar model but incorporates a hybrid financing approach, with both public and private investment in charging infrastructure and fleet upgrades. This structure has enabled the deployment of nearly 1,500 electric buses, representing more than 20% of the fleet, while **reducing maintenance costs by 40% and avoiding more than 100,000 tons of CO_2 annually**. Santiago currently operates over 400 e-buses and plans to scale up to 6,000 by 2040 (ITDP Brazil, 2023a; ZEBRA, 2024).

Electrification only delivers full environmental benefits when paired with clean electricity. To **maximize environmental and cost benefits**, some cities are also investing in clean and resilient energy systems. **In Cascavel, Brazil**, the electrification of part of the public bus fleet was paired with the development of a municipally owned solar power plant. Built on a decommissioned landfill, the plant generates enough electricity to power the 15 electric buses introduced

in 2022 and offset the energy use of other municipal services. This integrated model reduces dependence on the grid and cuts long-term operating **costs—saving an estimated USD 740,000 per year**, with a payback period of just four years (Cascavel City, 2023; Diário do Transporte, 2024). By planning charging infrastructure and energy generation together, Cascavel ensures scalability while reinforcing energy resilience and climate benefits.

Governments at all levels play a critical role in enabling and scaling zero-emission public transport. Implementing **policy frameworks that provide long-term targets and funding and reduce investment risks** is a good strategy to accelerate the full transition. **In China**, coordinated national strategies—including the New Energy Vehicle (NEV) policy and the Made in China 2025 industrial plan—have combined subsidies, tax exemptions, and mandatory technical standards to accelerate adoption at scale (Enviliance, 2023; CSET, 2022). These policies not only **lowered vehicle and battery costs but also strengthened local manufacturing and supply chains**. Clear targets, such as full fleet electrification in major cities by 2035, have given direction to municipal planning. National safety and interoperability standards—like plug compatibility and battery monitoring systems—have ensured quality and built public confidence, enabling the deployment of more than 500,000 electric buses across the country (ICCT, 2021; CATARC, 2025; ITDP, 2025a).

Through **coordinated action across transport, gender, and economic development agencies**, electrification can become a strategy to advance social equity while improving operations. **In Bogotá, Colombia**, the city launched La Rolita, a public operator with an all-electric fleet and a gender-inclusive mission. More than **50% of its drivers and workforce are women**, and they are supported by tailored training programs, childcare facilities, lactation rooms, and financial assistance for license recategorization. By linking fleet electrification with workforce inclusion and care-centered infrastructure, Bogotá **improved service delivery and job quality but also expanded access in underserved areas and contributed to better local air quality** (C40 Cities, 2023b).

These cases show that delivering zero-emission public transport requires a holistic approach—one that connects vehicles, infrastructure, and energy systems under stable, long-term institutional guidance. When these elements align, electrification becomes not just a technological shift but a catalyst for broader improvements in service quality, reliability, and sustainability.

Cascavel BRT station in the Paraná region in Brazil. **SOURCE:** ImagensstockBR via Shutterstock.

FOR EVERYONE

QUALITY

A public transport system that truly serves everyone is one that removes physical, social, and economic barriers to access. It enables people of all ages, incomes, genders, and abilities to travel with safety, dignity, and ease. Inclusion is essential for building stronger cities, improving access to opportunity, and ensuring that public investments benefit the full diversity of people.

Achieving this vision requires deliberate public action. Governments must embed equity into system design, operations, and financial planning if they want to achieve public transport that is good for everyone. This includes expanding service coverage in underserved areas, adopting fare structures that promote affordability—such as social tariffs and income-based subsidies—and applying universal design principles to improve usability across the travel chain. Service hours must also reflect the needs of all users, including those who work late shifts in sectors like hospitality and retail. Night-time service expansion can be key to ensuring access and safety for these populations. Equally important are accessible communication tools—clear signage, maps, mobile apps, and visual-audio announcements—that are intuitive, multilingual, and inclusive of diverse user needs.

In many cities, informal or semiformal services such as minibuses play a critical role in meeting daily mobility needs—especially for women, low-income groups, and residents of underserved neighborhoods. As cities seek to integrate these services into the broader public transport network, they must address challenges such as coordination across operators,

Wheelchair accesible tram station in Kaohsiung, China.
SOURCE : ITDP China

service variability, and institutional fragmentation. Inclusive governance models that engage paratransit operators and users—through participatory planning, pilot programs, and performance-based contracts—can help improve service quality while preserving flexibility and local knowledge. Achieving this requires strong coordination across transport, social policy, and land use agencies.

Accessibility must also extend to participation in planning. People—especially those who have been historically excluded—must have a voice in shaping the systems that serve them. Participatory planning, co-design processes, and community engagement in budgeting and decision-making help ensure that services respond to real needs and foster public trust. At the same time, inclusive employment policies in the transport sector can improve representation and system responsiveness. This includes promoting diversity in hiring and leadership, supporting equitable working conditions, and making operational roles more accessible to underrepresented groups.

Data collection also plays a central role in designing inclusive systems. Disaggregated data—by gender, income, age, race, or disability—helps to identify gaps in access and tailor interventions that address structural inequalities in mobility. Integrating data analytics with community insights enhances the relevance and effectiveness of inclusion strategies.

Public awareness campaigns can reinforce these efforts by encouraging respectful behavior and informing passengers of their rights and available support. When authorities lead with equity, they not only expand access for excluded groups but also improve the system's resilience, performance, and legitimacy.

HOW ARE CITIES PUTTING INCLUSIVE PUBLIC TRANSPORT INTO PRACTICE?

Making public transport truly inclusive requires cities to reframe how systems are designed, governed, and evaluated—centering access, safety, and affordability for the people who need it most. In addition to building accessible infrastructure, this also involves ensuring that institutions listen to diverse users, tailor services to different needs, and actively address long-standing social inequalities.

A starting point is to **embed universal access in infrastructure and service design** from the earliest planning stages and then apply it across the full travel chain. **In Peshawar, Pakistan**, the Zu Peshawar BRT was planned with the explicit goal of making mobility safe and accessible for women, older adults, and people with disabilities. The system includes step-free access, level boarding, tactile wayfinding, and gender-sensitive design features such as women-only waiting areas and staffed ticket booths. These features were shaped through direct engagement with community organizations, ensuring that the design reflected local realities. Since its launch, **women's ridership has increased tenfold, and travel times along the corridor have been cut by more than half**, demonstrating how inclusive design supports both equity and efficiency (ITDP, 2022).

Beyond infrastructure, governments are taking steps to **improve safety, comfort, and dignity** across the user experience. Safety extends beyond crash prevention to include protection from harassment, theft, or other forms of violence—particularly for women, children, and gender-diverse individuals. **In São Paulo**, SPTrans launched a comprehensive effort to prevent harassment and promote equity. Over **31,000 drivers and fare collectors received training** on gender and racial sensitivity. The agency also created a Women's Support

Peshawar, Pakistan.
SOURCE: Asian Development Bank (ADB)

Station to **assist victims of violence and used disaggregated data to adapt services to travel patterns**, such as increasing frequency on routes used more often by women and caregivers (ITDP Brazil, 2023b). These measures, combined with infrastructure improvements such as lighting and redesigned stops, strengthened both the perception and the reality of safety across the network.

Inclusion also depends on **policy tools that align funding and planning with equity goals**. **In Jakarta**, the JakLingko program integrated BRT, MRT, LRT, and minibuses into a single fare system using smart cards and capped daily fares—lowering costs for low-income users and making multimodal trips more seamless. Physical improvements, such as pedestrian bridges and safer station access in underserved areas, **expanded reach and increased ridership by over 15%, while also reducing vehicle emissions by approximately 10%** (ITDP Indonesia, 2021).

Governments can also promote inclusion by addressing gender gaps in the transport workforce—**creating policies and programs that remove barriers for women to enter, remain, and thrive in these roles**. **In Jalisco, Mexico**, the state government restructured the Women Drivers (Mujeres Conductoras) program to train and support female drivers. Participants receive comprehensive instruction, childcare support, and flexible scheduling to accommodate caregiving responsibilities. Transport companies report that **female drivers show significantly lower turnover and absenteeism, contributing to safer, more attentive service** (C40 Cities, 2023a). This, in turn, leads to better, more reliable service. By improving working conditions and diversifying who operates public transport, Jalisco is showing how gender-equity policies can strengthen both workforce stability and service quality.

These examples show that inclusion is not a side benefit—it's a core element of quality public transport. By combining thoughtful design, targeted policies, and participatory governance, cities increase ridership and public trust while building systems that work better not just for some but for everyone.

WELL-MANAGED

FOUNDATION

A well-managed public transport system functions as a unified network that meets public needs, adapts to changing demand, and fosters continuous improvement. It delivers good services that are reliable, frequent, integrated, and comfortable. These outcomes depend on strong institutional coordination and clear mandates that ensure that planning, oversight, and service delivery are accountable and aligned with public goals. In well-managed systems, responsibilities are clearly distributed and well-understood—across agencies and levels of government, and between public and private actors—enabling strategic decisions and long-term performance.

Achieving this level of management requires strong governance frameworks, robust institutional capacity, and consistent planning practices. Rather than a patchwork of disconnected services, good public transport needs to be treated as an integrated system—with cohesive and defined rules, aligned objectives, and mechanisms for monitoring and adjustment to changing conditions.

While governance structures vary across contexts, certain functions are commonly required to ensure system coherence and accountability. These include planning, regulation, financing, infrastructure provision, service contracting, performance monitoring, and user engagement. To that end, it is key to match the scale of the problem to the scale of government. This will help determine who is best positioned to take on each role. Below are core functions that must be fulfilled, along with the levels of government that typically oversee them, depending on local capacity and institutional arrangements:

- **Overseeing day-to-day operations and service quality:** Often led by local governments, who are closest to users and best positioned to adapt services to local needs and land use patterns. In some cases, state or national governments assume this role when local capacity is limited.

- **Designing and adjusting routes, schedules, and service integration:** Typically a local or metropolitan function, especially where multimodal coordination and land use alignment are required.

- **Coordinating services across jurisdictions and harmonizing fares:** Best managed at the regional or state level, where agencies can align objectives across multiple municipalities within a metropolitan area.

- **Defining legal and regulatory frameworks, vehicle standards, and procurement rules:** Usually the role of national governments, especially when it involves fleet imports, emissions standards, or national labor regulations.

- **Providing funding and financial oversight:** A shared responsibility, with national governments often supporting capital investment and subsidies, and local or regional agencies managing operational budgets.

- **Supporting institutional capacity-building and data systems:** Typically led by national or state-level institutions, often in collaboration with local authorities, to ensure consistent standards and enable system-wide planning.

Mexico City's public transport system allows users to transfer between different modes within the Integrated Mobility Network, improving the efficiency and connectivity of the city's public transport systems.
SOURCE: Secretaría de Movilidad de la CDMX.

In addition to public coordination, well-managed systems also rely on strategic engagement with the private sector. Private actors can play a key role in areas such as service operation, digital fare integration, and data analytics. Multimodal coordination, in particular, often benefits from private-sector innovation in automation and big-data computing. This requires structuring transparent partnerships, aligning public and private objectives, and ensuring data security—particularly when platforms and systems are outsourced or co-managed.

In parallel to strengthening institutional mandates, governments must also invest in the technical capacity building of the workforce. As technologies evolve, staff across agencies and operators require new skills in areas, especially in cases like zero-emission vehicles, safety and security, and gender and social inclusion. This may involve updating engineering curricula, supporting remote training platforms, and developing on-the-job learning opportunities to build long-term technical capacity.

To carry out these roles effectively, public transport agencies must have clear mandates, stable leadership, and autonomy to make strategic decisions. They also need technical expertise, legal authority, and access to funding to enforce service quality, plan long-term, and coordinate with other sectors. To that end, effective governance requires balancing institutional stability with public accountability. Agencies must be empowered to make long-term decisions without being subject to political volatility, while remaining answerable to the public interest through transparent oversight and performance monitoring. Governance frameworks should be designed to encourage collaboration across levels of government while also supporting cross-sectoral integration with housing, environment, health, and social policy—especially in metropolitan areas where jurisdictions intersect.

HOW ARE CITIES PUTTING WELL-MANAGED PUBLIC TRANSPORT INTO PRACTICE?

A strong foundation begins with **governance and institutional capacity** across all levels of government. In Indonesia, national reforms launched in 2015 empowered local governments to take charge of urban transport planning and operations. In cities like Medan and Bogor, public authorities supported the reorganization of thousands of angkot (minibus) operators into cooperatives and companies, enabling more consistent oversight and coordination with formal contracts. This restructuring, backed by digital fare integration and better working conditions, led to ridership increases of up to 30% and visible reductions in congestion (ITDP Indonesia, 2020; World Bank, 2021a).

Advancing **integrated planning and service reliability** requires the ability to match service to demand and ensure smooth connections across the network. Digitalization and efficient data usage strengthen management by enabling real-time regulation and optimization. In Mérida, Mexico, digital tools such as GPS tracking, automated passenger counters, and electronic fare collection were introduced to strengthen operational control and enable more responsive planning. These systems reduced wait times, eased crowding during peak hours, and made it easier for the city to coordinate services across operators. By integrating data into day-to-day operations, Mérida made the system more efficient and transparent—reducing passenger wait times by 20% to 30% and increasing operational cost-efficiency by 10% by 2021; ridership increased 15% by 2023 (Ideamos, 2023; World Bank, 2021b).

Improving **service quality and system coordination** also means rethinking how services are contracted, monitored, and incentivized. Strategic planning and efficient procurement can be key to that, through establishing clear operational expectations, monitorable performance indicators, and enforcement mechanisms that align operator incentives with public goals. In Nairobi and Accra, authorities redesigned service agreements to prioritize reliable, well-connected operations—tying payments to kilometers traveled rather than passenger volume, and introducing electronic fare systems to ensure transparency and improve planning. Today, more than 85% of the fleet operates under this model, with new infrastructure and service standards helping to reduce congestion and improve safety across the network. Combined with investments in terminals and route restructuring, these changes reduced congestion by up to 30% and improved safety, with traffic-related accidents falling by 40% (World Bank, 2022; ITDP Africa, 2023).

These experiences show that well-managed public transport systems depend not only on strong frameworks and plans but also on local leadership, digital innovation, and the ability to align service provision with public goals.

Electric buses in Mèrida, Yucatán. **SOURCE:** Agencia de Transporte de Yucatán.

WELL-FUNDED

FOUNDATION

A well-funded public transport system has the financial capacity to deliver consistent, high-quality, and frequent, affordable service over time. It ensures that people can rely on public transport every day—whether for commuting, caregiving, or accessing essential services—without the risk of sudden service cuts or fare hikes. This stability depends on having adequate resources to cover capital costs, ongoing operations, and long-term improvements, including vehicle maintenance, staff salaries, safety measures, and infrastructure upgrades. A well-funded system also enables planning beyond electoral cycles, giving continuity to long-term visions, plans, and operations.

Passengers pay for the bus with a public transport card. This is part of the local government's program to modernize the city's bus service. **SOURCE:** wina soe via Shutterstock.

Cities and national governments can achieve this by introducing a mix of funding and financing strategies tailored to their local context, adopting diversified business models, strengthening institutional capacity, and committing to consistent long-term investment. Rather than promoting a single approach, successful systems combine multiple revenue sources, embed affordability goals into funding decisions, and maintain strong institutional frameworks to manage investments effectively.

Funding refers to resources directly allocated for expenditures—both capital (such as vehicles and infrastructure) and operational (such as driver salaries, maintenance, and fuel). While fare revenue and local taxes have traditionally covered operating costs, capital investments have often depended on national programs or external borrowing. In today's fast-changing urban landscape, more flexible and diversified strategies are

needed to meet rising demand and adapt to evolving mobility patterns. Progressive fare policies, employer-based contributions, parking levies, congestion charges, advertising in stations and vehicles, and land value capture are among the tools cities are adopting to strengthen revenue streams while promoting sustainability.

In many systems, especially where operations are contracted to the private sector, steady public funding plays an essential role in covering service payments. Rather than purchasing buses or hiring staff directly, governments fund these services indirectly through long-term contracts—creating predictable revenue streams critical to ensuring stability, quality, and affordability.

Financing, by contrast, enables cities to access capital upfront—usually through instruments like concessional loans, municipal bonds, or climate-aligned funds—and repay over time. While it does not replace funding, it plays a complementary role, bridging the gap between investment needs and available revenue. Development banks and private finance partners can be instrumental, especially when projects are aligned with social and environmental priorities. Ensuring access to these instruments requires sound governance, transparent budgeting, and credible long-term planning.

Strong institutional capacity is also essential. Transport agencies must be equipped to manage resources responsibly, implement cost-effective procurement, and monitor results. Clear financial reporting and public accountability mechanisms build trust and improve decision-making. This capacity is particularly critical when engaging private actors, as governments must be able to negotiate and manage contracts that align with public goals while remaining financially sustainable. Without it, partnerships can lock agencies into unfavorable terms or weaken long-term viability. Long-term public sector commitment can protect systems from short-term economic and political pressures—supporting continuity, stability, and affordability over time.

Ultimately, financing should be used strategically to accelerate transformative projects—such as fleet modernization, network expansion, or clean energy infrastructure—while stable funding ensures that systems remain affordable and reliable in the long run. A resilient funding model also allows public transport systems to adapt to changing mobility patterns and growing demand, ensuring long-term financial and social sustainability.

In some contexts, investment in local supply chains—particularly for zero-emission systems—can support long-term sustainability. While not necessary for all cities or countries, especially those with smaller fleets or limited industrial capacity, building domestic manufacturing capabilities may reduce costs, improve resilience, and generate local employment. When aligned with coherent industrial policies and stable public investment, local supply chain development can complement broader efforts to strengthen public transport systems.

HOW ARE CITIES PUTTING WELL-FUNDED PUBLIC TRANSPORT INTO PRACTICE?

Ensuring adequate and sustainable funding for public transport means not only raising revenue but also managing it strategically and transparently. Cities are combining multiple sources of funding and financing to build systems that are both affordable and resilient—delivering long-term impact without compromising service quality.

Pune-Pimpri-Chinchwad BRT in India. **SOURCE:** ITDP India.

One approach is establishing dedicated funding streams that align with broader urban policy objectives. In London, the **congestion pricing program** has been instrumental in both managing traffic and raising resources for public transport. Since its launch in 2003, it has reduced traffic in central London by 30% and generated over £4.3 billion in gross revenue (OECD, 2022; Transport for London, 2023). These funds have supported bus fleet upgrades, expanded cycling and walking infrastructure, and improved air quality—demonstrating how well-structured charges on car use can fund sustainable alternatives and reduce emissions at the same time (Transport for London, 2023). In parallel, direct national subsidies remain an important source of funding in many countries—particularly for operational costs—even though they may be vulnerable to political and budgetary shifts over time.

Cities are also exploring innovative financing instruments to bridge capital gaps and unlock large-scale investment. In Pimpri Chinchwad, India, the local government issued **green bonds** to raise funds for walking and cycling infrastructure and improved last-mile access. By raising USD 24 million through the bond issuance, backed by robust financial safeguards and cross-city procurement strategies, the city reduced costs by nearly 50% and also attracted new investors and accelerated project delivery (ITDP India, 2023; ITDP India, 2024; *The Times of India*, 2025). The initiative reflects how financing can be designed to support long-term system improvements without compromising fiscal responsibility.

At the same time, cities and national governments are using revenue reinvestment strategies to strengthen equity and long-term system viability. In Colombia, the **national fuel tax includes a dedicated contribution to urban transport** infrastructure: 50% of the proceeds are earmarked for mass public transport projects across the country. This mechanism has provided consistent co-financing for BRT systems in cities such as Bogotá, Medellín, Cali, and Barranquilla, helping to scale implementation and reduce the fiscal burden on municipal governments (WCTR, 2016). By linking fuel consumption to sustainable transport investment, the policy also creates a broader alignment between environmental goals and infrastructure finance.

Together, these experiences show that funding and financing are not just about raising money—they're about shaping systems that are more reliable, inclusive, and prepared for future growth. Whether through congestion pricing, climate finance, or capital markets, well-funded transport systems reflect a city's long-term commitment to public service and social equity.

A high-quality public transport system is not just a means of mobility—it is a cornerstone of inclusive, low-carbon, and resilient cities.

Ultimately, good public transport systems are the outcome of a network that have good service, zero emission and for everyone. When guided by well-managed and well-funded foundations—that means having strong governance, stable funding, clean energy, and equity-driven design—public transport becomes a catalyst for urban transformation.

These principles are most powerful when embedded in broader efforts to create compact, people-centered cities that prioritize walking, cycling, and accessibility. By advancing this vision, cities can shape mobility ecosystems that are efficient, affordable, and truly serve the public good.

Yet delivering this vision is rarely easy. Public transport reform requires navigating political cycles, limited resources, and institutional complexity—often with incremental progress. By starting with practical steps and aligning stakeholders around shared goals, cities can build momentum toward lasting, systemic change.

Realizing this transformative potential requires sustained political will, cross-sector collaboration, and ongoing innovation. It calls on governments, operators, communities, and stakeholders to work together toward common goals—building cities where quality public transport enables thriving, equitable, and climate-resilient futures for all.

The TransMiCable in Bogotá is integrated with various bus lines and Transmilenio stations, providing seamless public transport options.
SOURCE: ITDP.

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CONTACT

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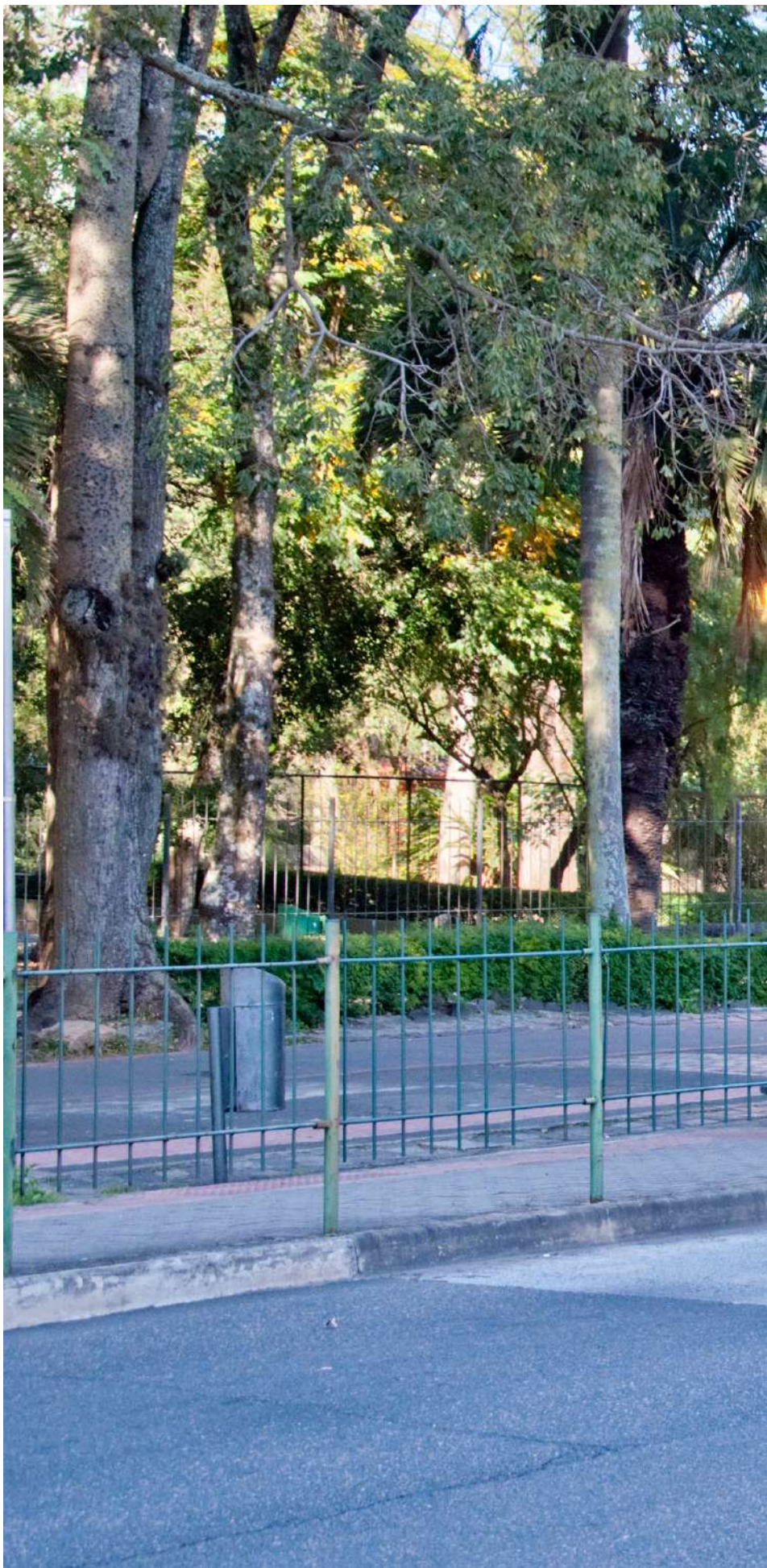
M: united-states@itdp.org