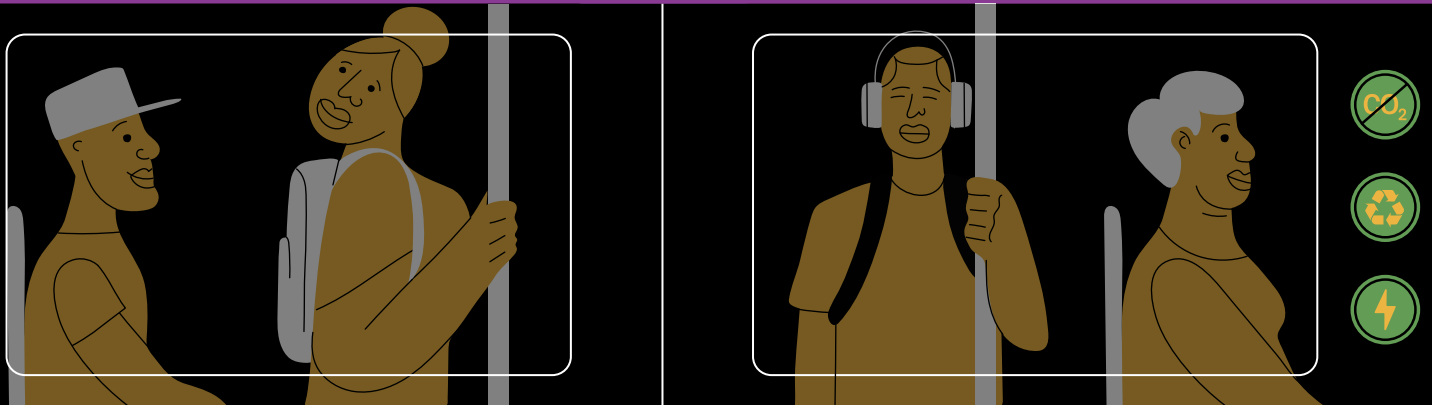


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Challenges and Solutions for Equitable **Mobility** Management in Brazil





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Challenges and Solutions for Equitable Mobility Management in Brazil

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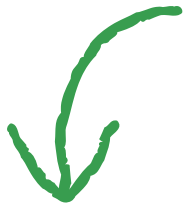


1.

Introduction

Transport Demand Management (TDM) strategies can guide solutions that are capable of reducing the externalities generated by motorized traffic and improving conditions for the promotion of more sustainable mobility. In Brazil, such measures need to be carefully designed so that they may enhance mobility for peripheral populations, without reinforcing the socioterritorial segregation observed in many Brazilian cities.

Discussions on ways to provide publicly accessible, sustainable, and high-quality mobility are latent worldwide. **We must urgently consider ways to create more democratic road space.** Once better traveling conditions are in place for collective and active public transportation, people's quality of life and the overall urban environment tend to improve. However, **pricing strategies must also build on a redistributive approach, making urban opportunities more widely accessible to all.**



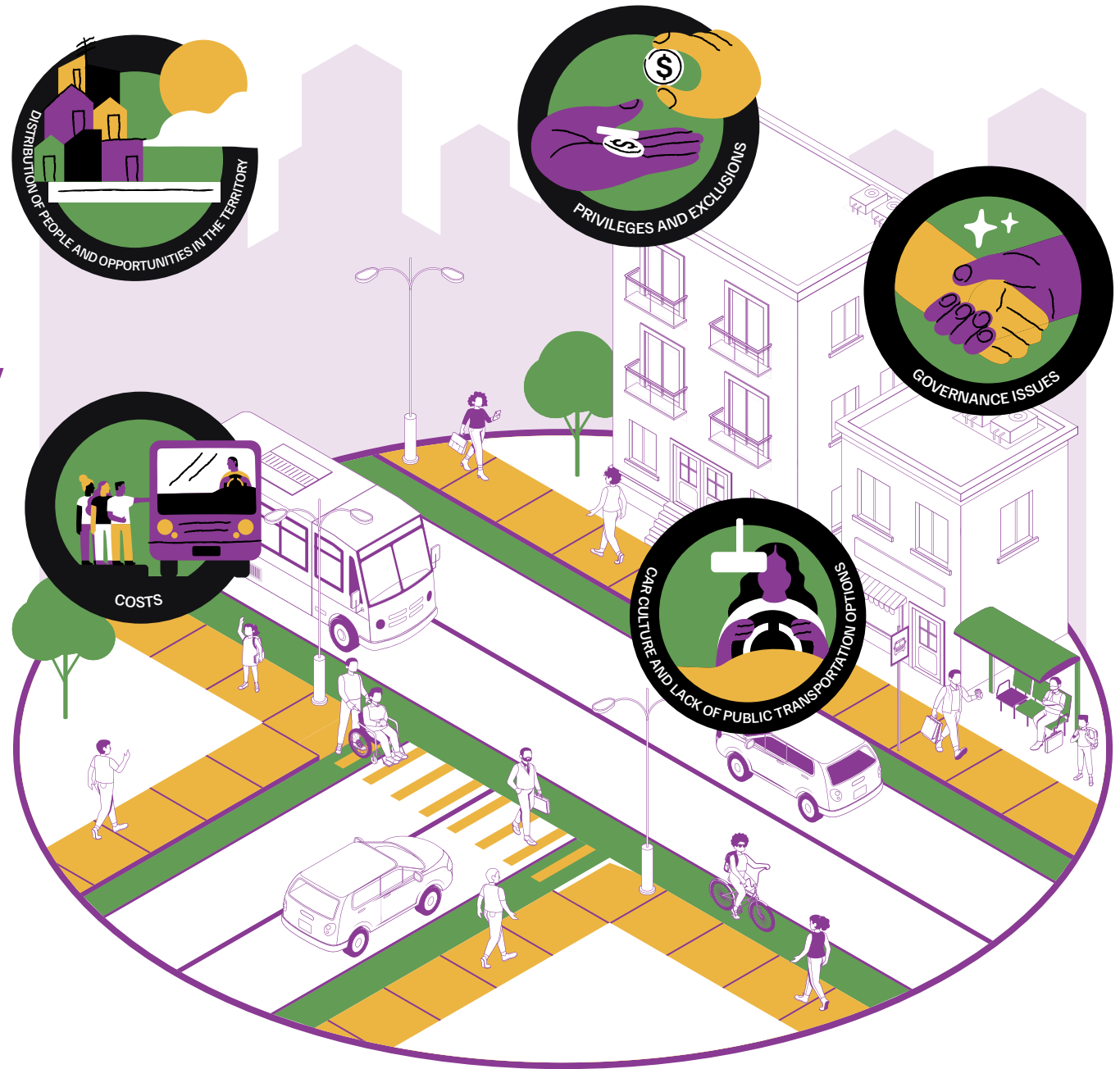
This study is based on bibliographic surveys, data, and indicators, in addition to interviews carried out with a group of 11 urban mobility experts.

We must urgently consider ways to create more democratic road space.

2.

Challenges to Equitable Urban Mobility Management

As a sensitive issue in a country with a long history of social and racial segregation, the implementation of mobility management strategies needs to consider the national context in its full complexity so that policies may make cities truly more equitable.





Distribution of people and opportunities in the territory

In most Brazilian cities, Black, poor, or impoverished populations tend to live in suburbs and peripheral areas¹. These groups have to make long commutes every day, or travel long distances to access basic services such as education or healthcare.

Some of the causes for this are: (1) suburbs have less infrastructure; (2) investments concentrated in historically favored areas drive the working class away; and (3) the sprawling growth of cities demands long daily commutes to perform productive activities.

Some of the consequences are: (1) restricted access to certain areas and activities, such as education, healthcare, leisure, and culture; (2) reduced traveling capacity; (3) more obstacles preventing the more economically vulnerable populations from obtaining employment; and (4) scarce, expensive, low-quality public transportation, with limited services and high costs.



Privileges and Exclusions

In Brazil, urban mobility structures preserve the privileges of certain groups, while maintaining (or expanding) the exclusion of most citizens.

Some of the causes for this are: (1) the neighborhoods with a mostly White population have better infrastructure when compared to areas with a majority Black or mixed-race population²; (2) vehicle ownership taxes (IPVA) and property taxes (IPTU) fail to charge wealthier citizens in a consistent manner; (3) public transportation is scarce and lacks capillarity, serving mainly to connect suburbs to the city center, with little or no connection between peripheral neighborhoods; (4) public transportation is not safe, especially for Black women living in the suburbs; and (5) commutes are very long.

Some of the consequences are: (1) maintenance of the current social structure, enabling elites to perpetuate their *status* and comfort, and preventing the social ascension of economically vulnerable populations; (2) high numbers of road crashes with injuries and deaths, especially among motorcyclists, pedestrians, and cyclists; (3) limited access for the Black population to central areas, where most urban opportunities and activities are concentrated; and (4) reduced quality of life resulting from spending too much time on transport.

¹. Some areas located on the outskirts of cities are also home to high-income residents, who use automobiles as their main means of transportation.

². <https://itdpbrasil.org/como-o-servico-de-transporte-publico-no-brasil-reflete-o-racismo-estrutural/>



Governance Issues

The dynamics of politics in Brazil are manifested in different ways, some of which are reflected in the mobility options offered to citizens. **Political aspects, observed both at the national and the municipal levels, may hamper the adoption of redistributive policies** in a range of areas, contributing to the maintenance of existing social hierarchies.

Some of the causes for this are: (1) the public transportation system is designed to maintain a business model that benefits the private sector, even if it means reducing service quality; (2) mobility policies in Brazil are treated as government policies, and tend to last only one term, with no guarantee of maintenance; (3) pricing policies are seen as electoral risks, as they may be unpopular among the general population; (4) informal and non-State forces linked to drug trafficking, mafias, and militias exert pressure based on their own interests; and (5) given the relevance of the automobile industry and fossil fuel sectors to the economy, they have the power to influence governance decisions.

Some of the consequences are: (1) exclusion of Black, poor, and peripheral populations from non-work-related activities; (2) acceptance that longer (less profitable) routes will be reduced, leaving peripheral populations unattended; (3) failure to implement pricing strategies due to the risk that they may find resistance among the electorate; (4) emergence and expansion of informal transportation on more profitable routes that lack adequate formal services; and (5) difficulty in breaking with the profitable logic of contracts based on kilometers driven, which tend to increase profit and operate vehicles at high capacity.



Costs

The way the system is set up imposes material and immaterial costs on users. Due to the funding model currently in place, **it is increasingly difficult to achieve some sort of financial balance that guarantees both revenue for managers and quality for users**. Mobility costs represent one of the main arguments against pricing measures.

Some of the causes for this are: (1) fares are the main or only source of revenue for public transportation systems; (2) companies are remunerated according to the number of passengers they carry, and not the service they provide; (3) most of the frequent users of public transportation are from classes C, D, and E; and (4) travel and waiting times are long.

Some of the consequences are: (1) high fares, which fail to comply with federal legislation provisions on affordability³, and exclude economically vulnerable groups; (2) fewer public transportation routes in peripheral regions, which results in vehicles being crowded; (3) greater impoverishment and indebtedness of the population; (4) difficulty in accessing productive activities, as well as health, education etc.; (5) less time allocated to non-work-related activities, such as leisure, recreation, and culture; and (6) impact on users' mental health, due to factors such as time spent on transport, overcrowding, exposure to violence (thefts and harassment), and noise pollution, among others.

³. Under federal law, utility rates must be affordable in order for services to be accessible.



Car Culture and Lack of Public Transportation Options

Urban development based on a car culture has given rise to the notion that car and motorcycle ownership is motivated by a cultural factor exclusively linked to *status*. However, it is necessary to consider the real motivations for the use of private vehicles, so as not to run the risk of developing an elitist narrative that disregards other potential causes for people's desire to have a car or a motorcycle.

Some of the causes for this are: (1) higher-income social groups tend to impose obstacles to extending public transportation to certain areas of the city due to their perceived impact of property devaluation; (2) the urban model in place is designed to make driving faster and more comfortable; (3) access to urban activities is faster and easier for drivers; (4) there is limited or no public transportation in certain areas at non-peak hours; and (5) in recent decades, governments have provided several incentives for the purchase of private vehicles, including tax exemptions.

Some of the consequences are: (1) restricted access by public transportation to certain areas planned for private vehicles; (2) perpetuation of the idea that cars are the most comfortable and convenient mode of transportation in Brazilian cities; and (3) a societal shift toward cars as they promote a sense of belonging and inclusion, and provide access to productive and non-work-related activities etc.

3.

Potential Solutions for Brazil

In order to promote social justice when implementing TDM strategies, sustainable mobility funding schemes need to ensure that lower income users are not unfairly burdened. This could be done by applying progressive rates and taxes to higher-income populations. Furthermore, solutions to finance mobility must have diverse sources, **rather than relying solely on the transport sector.**



1. Urban Mobility Fund:

A) CREATION OF A SINGLE URBAN MOBILITY SYSTEM (SUM)⁴:

Earmarking minimum percentages of subnational budgets for public investment in transport, with budget transfers from the Federal Transportation Fund to respective state and municipal funds.

B) TNC TAXATION⁵:

Charging TNC operators for the use of road space, with revenues being directed to a Municipal Mobility Fund.

C) CREATION OF CITY TAX:

Charging property owners or tenants a modest annual fee, based on the total cost of services. This fee may be collected in a similar way to the existing waste collection and disposal fee.

⁴. Proposal presented in the [Manifesto pela criação do Sistema Único de Mobilidade Urbana — SUM](#), developed and published by the MDT Institute.

⁵. Although travel apps are not collective transportation modes, they may be considered public transportation.



2. Public Transportation:

A) CHANGING THE TRANSPORTATION VOUCHER METHODOLOGY:

Allocating a percentage of revenues from companies with a minimum number of staff to a municipal Public Transport Investment Fund⁶.

B) REDUCING INVESTMENT IMBALANCE BETWEEN PUBLIC AND PRIVATE TRANSPORTATION:

Prioritizing investment in public transportation, especially in peripheral areas.

C) EXPLOITING COMMERCIAL AND ADVERTISING OPPORTUNITIES AT BOARDING POINTS, VEHICLES AND URBAN FURNITURE, WITH TRANSFERS TO MUNICIPALITIES AND STATES:

Leasing certain spaces in vehicles and transport facilities for commercial and advertising purposes.

D) USING THE CONTRIBUTION FOR INTERVENTION IN THE ECONOMIC DOMAIN (CIDE):

Earmarking a percentage of the taxes collected on fuel imports and sales⁷ for sustainable transport.

E) REDUCTION OR EXEMPTION FROM SERVICE TAX (ISS):

Reducing municipal taxes on transportation services.

⁶. The main example of applying this measure comes from the region of Île de France (in France): the TVT (*taux du versement transport*, or transport contribution tax). For more information, see [IPEA \(2013, p. 14\)](#).

⁷. In 2003, the National Mayors Group (FNP) proposed that 75 percent of CIDE revenues be directed to a National Transportation Fund, and that 25 percent be allocated to urban public transportation.



3. Individual Motorized Transport:

A) PARKING MANAGEMENT:

Adopting adequate pricing schemes for on- and off-street parking⁸, and managing parking spaces and their revenues at the municipal level.

B) PRICING FOR THE USE OF ROAD SPACE ACCORDING TO THE TYPE OF VEHICLE:

Charging vehicles based on the area they occupy (in square meters) and their power (in horsepower)⁹.

C) SOCIAL-REGISTRY-BASED PRICING:

Providing fee exemption or reductions to some groups (considering, for example, income or neighborhood of residence).

D) TAXATION ON THE OWNERSHIP OF SECOND OR OTHER VEHICLES:

Charging a federal or state tax to households that have more than a certain number of vehicles.

E) SPECIAL IPVA RATE FOR LUXURY AND/OR IMPORTED VEHICLES:

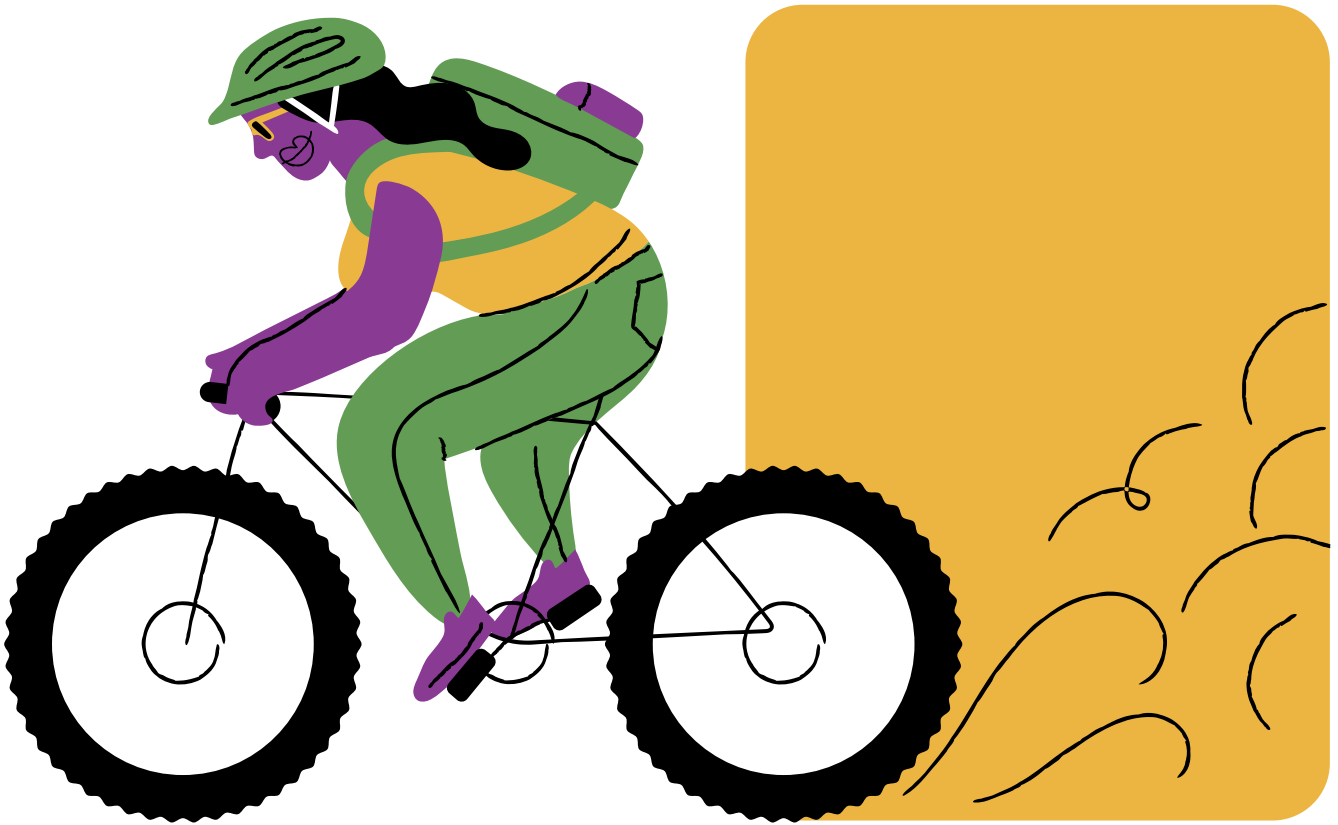
Setting a higher tax rate for luxury vehicles, directing these additional revenues to state or municipal mobility funds.

F) ALLOCATION OF FUNDS FROM FINES:

Allocating part of the funds collected through municipal traffic fines for sustainable modes of transportation.

⁸. For more information, see [ITDP, 2021](#); [ITDP, 2021a](#); [ITDP 2018](#); and [ITDP, 2017b](#).

⁹. This model is presented as the Contribution for the Use of the Road System (CONUSV). The proposed contribution would be higher for owners of larger and more powerful vehicles.



4. Active Transportation:

A) INCENTIVIZING CYCLO-LOGISTICS:

Encouraging the use of bicycles for deliveries.

B) INCENTIVIZING ACTIVE TRANSPORTATION MODES FOR SHORT AND MEDIUM DISTANCES:

Encouraging walking and cycling for trips up to 2 km and 8 km, respectively, depending on users' ability, while guaranteeing safe and comfortable public spaces.

C) INTEGRATION WITH MEDIUM- AND HIGH-CAPACITY TRANSPORT:

Integrating active modes with public transportation, enabling people to complete longer trips without having to rely on cars and motorcycles.



5. Land Use and Access to Opportunities:

A) COMPACT AND POLYCENTRIC DEVELOPMENT:

Shortening the distance between residential areas and urban opportunities by strengthening centralities.



6. Land Ownership in Urban Areas¹⁰:

A) PROGRESSIVE PROPERTY TAX:

Earmarking a percentage of the taxes paid on larger or luxury properties for reinvestment in transport.

B) BUILDING TAXATION:

Adopting instruments to calculate added value, especially for buildings benefiting from investment in transport infrastructure. Any improvement-related revenues could be invested in the transportation system itself.

C) COMMERCIAL ESTABLISHMENT TAXATION:

Charging commercial establishments considering their expanded reach provided by public transportation.

¹⁰. For more information on land-related issues, see [TOD Standard \(ITDP, 2017a\)](#).

6.

Examples in Brazil

In Brazil, pricing measures for the use of private vehicles are still developing. In cities where they have already been implemented, revenues may provide significant financial contributions to sustainable modes. In order for these strategies to be successful, it is essential that they take local context into account; that there is political will and efforts toward their implementation; and that there is a dedicated Urban Mobility Fund to ensure that revenues are indeed allocated to the transport sector, thus creating a cause-and-effect relationship.

SHORT TERM PARKING: ZONA AZUL DIGITAL — FORTALEZA

Fortaleza has been investing in and expanding its cycling network, [which by May 2022 had 411.5 kilometers of infrastructure](#), with a goal of reaching 500 kilometers by the end of 2024. In order to enable this growth, it was essential to **reinvest funds generated from short-term parking lots in the Zona Azul Digital**. The population living close to cycling infrastructure is the largest among all capitals analyzed by the [MobiliDADOS](#) platform (**51 percent**). It is worth pointing out that, in Fortaleza, a significant percentage of the population earning up to half a minimum wage reside within reach of these structures (45 percent, the highest figure for this income bracket).



Photo: Prefeitura de Fortaleza

TNC TAXATION — SÃO PAULO

In 2016, the city of São Paulo issued a local regulation to tax Accredited Transport Technology Operators (OTTCs, in the Portuguese acronym). This includes passenger trips provided by private vehicles and mediated through a digital platform. OTTCs are taxed according to the number of kilometers traveled, in the form of payment for the use of municipal road space. If these funds were directly reinvested in sustainable mobility, the 2019 revenue alone would have been sufficient to fully fund the expansion, renovation, and revitalization of all bus lanes in the city.



Photo: Pixabay

SHORT TERM PARKIG: ZONA AZUL ELETRÔNICA — SÃO JOSÉ DOS CAMPOS

The city of São José dos Campos implemented its Zona Azul Eletrônica, in which part **of the system's revenue is directed to a Municipal Transportation Fund to finance municipal public transportation, and for other road safety and urban mobility projects.** In the first six months of operation, the city raised over R\$ 2 million, more than R\$ 870 thousand of which were reinvested in the sector. This amount is enough to finance around 7 percent of all bus costs not covered by fares. Parking spaces have sensors to indicate they are available, and this information is accessible through an app or on bulletin boards. The app has several features, including enabling users to buy credits, or decide how long they plan to stay (ranging from 15 minutes to two hours).



Photo: Prefeitura de São José dos Campos

