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SOLUTIONS in Latin America

Urban mobility needs, policy barriers and the uptake of sustainable solutions in Latin American partner countries

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EXECUTIVE SUMMARY

Cities around the world have a need to establish sustainable transport systems, to provide efficient and safe mobility for their citizens with minimal environmental impacts. With limited opportunity to build new infrastructure, many cities need to increase the efficiency and capacity of their transport systems and are turning to innovative and technically advanced systems to contribute to this objective.

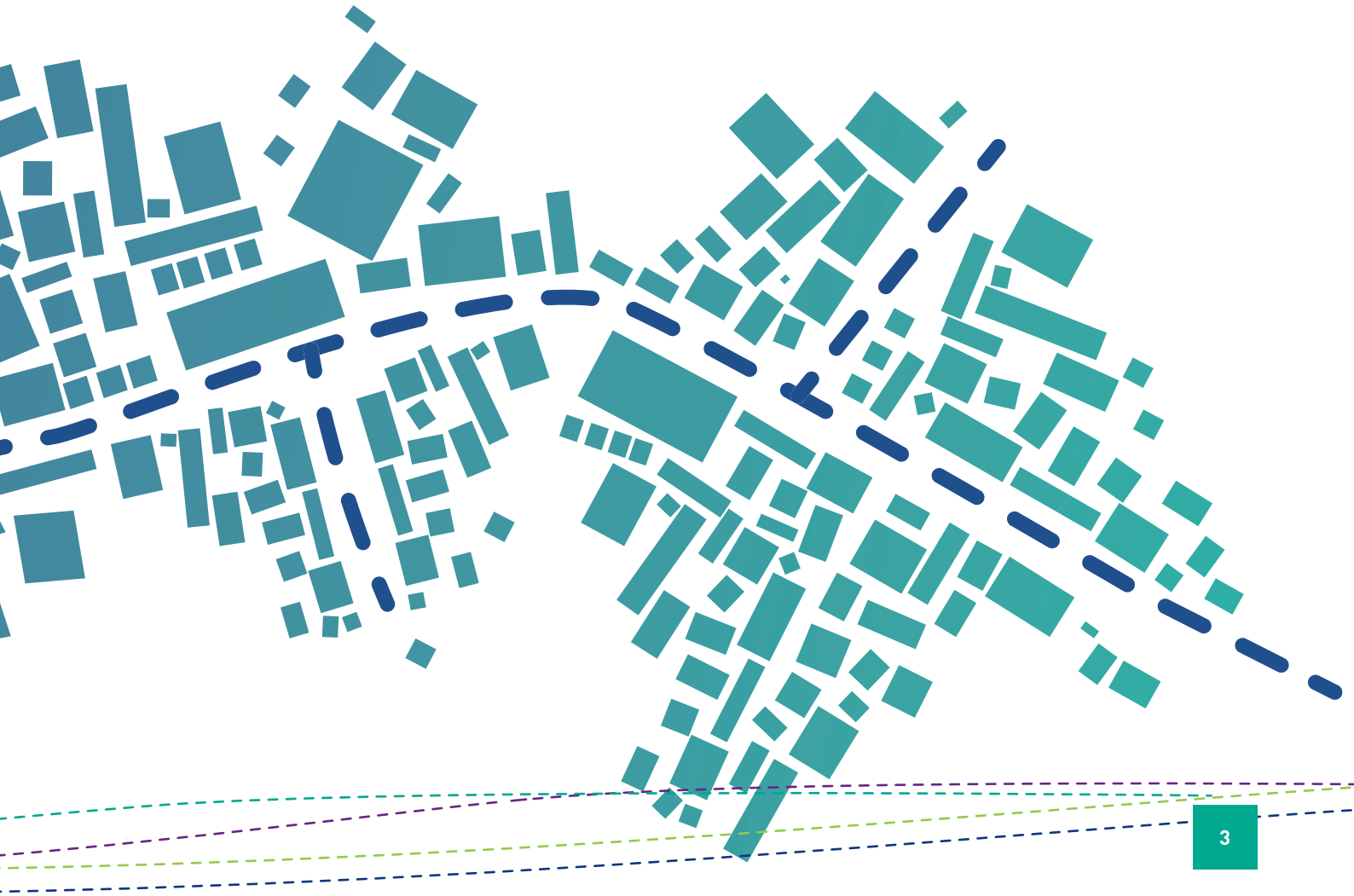
The take-up of urban mobility and transport solutions between global regions is particularly challenging as socio-economic conditions and policy frameworks differ substantially across the regions. Within Europe, a number of projects have successfully demonstrated take-up between cities, which confirms the value of collaborative learning and exchange of experiences within different cultures and planning practices.

Cities, regions and countries around the world often share similar urban mobility challenges with some cities being more or less progressive than others. While there are advantages to sharing best practices, examples and lessons learnt, it is beneficial for city officials and other relevant stakeholders to have a robust methodology in place, which they can follow to implement and harmonise successful urban mobility policies, measures and technologies.

Over the last two decades, some Latin American countries have implemented a series of measures to improve urban mobility, from more efficient public transport, often including integrated transport systems with specific solutions for high-demand corridors, as well as the development of non-motorised transport solutions.

However, the status of urban mobility transport in the whole region cannot be summarised into a single broad trend for all countries. Urban mobility is strongly influenced by a spectrum of economic, social and political factors indicating the need for analysing the conditions, trends and implications of sustainable urban mobility solutions in each of the different Latin American countries.

By joining the SOLUTIONS project, Latin American cities with different backgrounds committed to address mobility barriers in their cities, mostly focused on public transport and the development or improvement of Sustainable Urban Mobility Plans. The cities of Belo Horizonte, Curitiba and San José dos Campos, from Brazil, as well as the Mexican cities León and Durango, participated in this project.



INTRODUCTION

In December 2015, government representatives from around the world met in Paris for the 21st annual Conference of the Parties (COP) in order to review the implementation of the United Nations Framework Convention on Climate Change. The conference, known as COP21, reached, for the first time in over 20 years of UN negotiations, an unprecedented, legally binding and universal, agreement on limiting global warming to 1.5°C.

To meet the target, all countries will need to take important decisions and adopt actions for reducing their greenhouse gases emissions, the large majority of which are energy-related carbon dioxide (CO_2) emissions. Reducing energy consumption and improving efficiency is one of the most effective ways of reducing emissions at a global level, which, in 2012[1], reached approximately 34.5 billion tonnes annually.

The transport sector must play an immense role towards meeting the aforementioned target, as it accounts for almost 21% of global CO_2 emissions. The UN Secretary-General, Ban Ki-moon, also highlighted the importance of the sector earlier in 2015, issuing a challenge to "reshape the world's transport systems" and "find new green solutions".

Several cities around the world have successfully implemented sustainable urban mobility measures to enhance the efficiency of their urban transport systems, address major environmental challenges and improve the quality of life for their citizens. The local knowledge and experience gained by implementing such solutions is useful and significantly beneficial for other cities interested in introducing similar, positive changes.

The SOLUTIONS project brings together a wealth of experience and technical knowledge from international organisations, consultants, cities, and experts involved in transport issues and solutions. The knowledge compiled by this project, the experiences gained in the process of international cooperation between cities and the lessons that are learned on the transfer of green and innovative urban mobility solutions is a very valuable input for the further work of European and international researchers in this field.

The **SOLUTIONS in Latin America** report – one of three regional project publications – presents the urban mobility situation in Brazil, and Mexico, insights gained from research and interviews with city officials from these countries, and proposes successful sustainable urban mobility initiatives these countries can implement.

SOLUTIONS project partners conducted personal interviews with selected officials from these countries before hosting dedicated workshops where, together with participants, they discussed and assessed the local and national policy framework related to sustainable urban mobility and evaluated the transferability potential of mobility solutions. This report outlines the main urban mobility needs, policy barriers, drivers, and consequent recommendations for these countries.

The applicability and potential of the identified solutions in different cities and world regions depend on the local and national framework conditions, such as socio-economic aspects, and legal frameworks and individual cultural aspects, such as attitudes towards enforcement and control (i.e. what is accepted in one cultural context may not be accepted in another). City-specific aspects are also of great importance, such as spatial structure and land-use patterns or characteristics of mobility, like modal spilt. For Latin America, the methodologies varied, but in all cases a reciprocal visit with a leading city, and some workshops were expected, though not achieved in every case.

THE SOLUTIONS PROJECT

The Sharing Opportunities for Low carbon Urban transporTatION (SOLUTIONS) project aims to support the exchange of innovative and green urban mobility solutions between cities from Europe, Asia, Latin America and the Mediterranean. The project brings together a wealth of experience and technical knowledge from international organisations, consultants, cities and experts involved in transport issues and solutions.

The project's overall objective is to make a substantial contribution to the uptake of innovative and green urban mobility solutions across the world, by facilitating dialogue and knowledge-exchange, promoting successful policies, providing guidance and tailored advice to city officials and fostering future cooperation on research, development and innovation. Project activities are organised around following six themes:

- Public transport
- Transport infrastructure
- City logistics
- Integrated planning / Sustainable Urban Mobility Plans
- Network and mobility management
- Clean vehicles

For more on the SOLUTIONS project, visit:
www.urban-mobility-solutions.eu

1 European Commission Joint Research Centre (2013)

IDENTIFYING SUSTAINABLE URBAN MOBILITY SOLUTIONS

The SOLUTIONS project consortium consists of leading climate, mobility and transport experts from local authorities, consultancies and research institutes. All project partners have vast experience and expertise from working on sustainable urban mobility projects all over the world.

At an early stage of the project, the SOLUTIONS team identified and reviewed a large collection of sustainable urban mobility solutions, evaluating their transferability to cities in Asia, Latin America and the Mediterranean region. These were then "clustered" in six thematic areas and prioritised according to their relevance and transferability. However, it proved difficult to allocate some solutions into to a single cluster, as there were significant overlaps with other clusters. Following an evaluation, SOLUTIONS produced the following final six thematic clusters, listed below (Table 1) together with their respective urban mobility measures and solutions.

Table 1 - SOLUTIONS thematic clusters and respective urban mobility measures and solutions

1. Public transport	2. Transport infrastructure	3. City logistics	4. Integrated planning/SUMPs	5. Network & mobility management	6. Clean vehicles
BRT systems	Dedicated bus lanes	Urban deliveries with cargo-cycles	Stakeholder participation	Parking management	Registration restrictions / number-plate auctions
Trolley bus systems	Intermodal interchanges	Low Emission Zones	Institutional cooperation	Access restriction	Managing electric two-wheelers
Metro systems	Pedestrian infrastructure	Forums, portals, labels & training	Measure selection	Traffic management	Fuel economy / CO_2 standards
Alternative-fuelled public transport vehicles	Non-motorised infrastructure	Pick-up point networks	Monitoring and evaluation	Multimodal journey planning	Switching fuels: taxi fleets to EVs
Electric and hybrid public transport vehicles	Innovative, safe cycling infrastructure	Vehicle and operation restrictions		Cooperative ITS systems	Switching fuels: taxi fleets to LPG/ CNG
ITS for public transport	Cycle highways	Urban Consolidation Centres		Carsharing schemes	Taxing vehicles based on emissions
Integrated public transport network planning	Infrastructure for car- and bike-sharing	Reorganising municipal procurement			Clean vehicles in municipal fleets
Financing public transport	Pedestrianising city centres/ streets	Rail/ waterways for urban freight deliveries			Low Emission Zones
Integrated fare systems		Urban truck lanes			Informing about/ promoting clean vehicles
Eco-driving for professional drivers		Pricing measures			Infrastructure for clean vehicles
Bus priority measures					Clean modes of delivery in urban areas
Bike-sharing/ public bicycles					Replacing private cars / motorcycles with clean models

LATIN AMERICA

This report focuses on a select number of cities from countries in Latin America. To help the SOLUTIONS project analyse the state of urban mobility in these countries, it conducted personal interviews with municipal officials from cities in the region, and reciprocal visits with a leading city. SOLUTIONS then organised workshops.

The main mission of the SOLUTIONS project is to foster an exchange between cities on innovative and green urban transport solutions and support the actual take-up of such solutions in cities across the world. Take-up cities in Latin America - Belo Horizonte in Brazil (which engaged with Bremen, Germany); and León, in Mexico (which engaged with Curitiba, Brazil) - will act as showcases for the uptake of innovative and green urban mobility solutions in the various thematic clusters.

Belo Horizonte had the most solid experience, which contributed to feasibility studies, which local and thematic experts developed together. The studies helped develop packages of solutions that built on existing, planned and additional measures in the take-up city. The training cities (Durango, Mexico; and São José dos Campos, Brazil) learned from the experiences gathered in the take-up cities, and will benefit from the transferability guidelines and training kits developed by SOLUTIONS. The general description of the urban mobility situation in each country, and the specific insights related to a select number of cities, is based on this thorough and methodological fieldwork and the feedback received from city officials.

The research shows that Latin America has a number of urban mobility problems. Mainly characterised by rapid rates of urbanisation, the consequent growth of informal settlements in the region has led to urban sprawl - and the public transport sector has failed to cope. There are high fatality rates among people using sustainable mobility. Car ownership, and motorcycle ownership in some parts of the region, is increasing - very evidently in Colombia, Peru, Brazil, Uruguay, the Dominican Republic and Costa Rica. Based on these findings, SOLUTIONS cities have selected a number of measures to move towards a sustainable urban mobility development that is in line with the New Urban Agenda and a 1.5-degree stabilisation pathway. This report presents profiles of Brazil and Mexico; the policy drivers and barriers to implementing sustainable urban mobility measures; the recommendations of the SOLUTIONS experts; and the measures that would best tackle their problems.

Image: Luisa Zottis I EMBARQ Brasil


Image: WRI Mexico

Image: Luísa Zottis | EMBARQ Brasil

SOLUTIONS workshops fostered exchange between cities on innovative and green urban transport solutions

BRAZIL

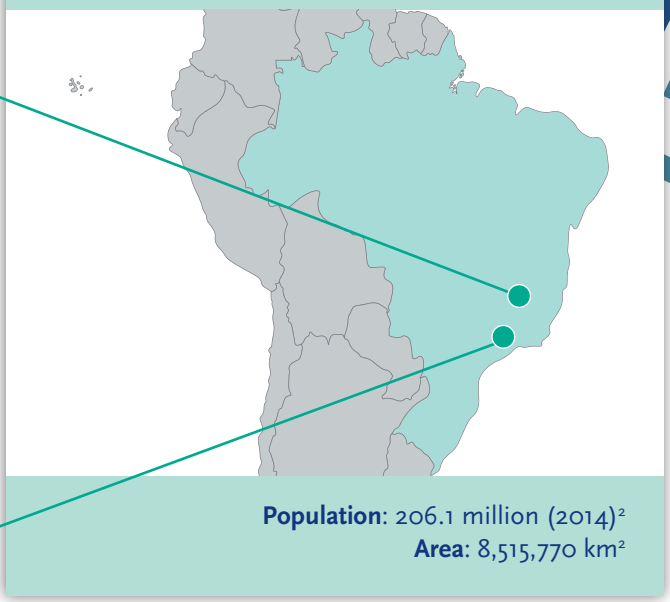
BELO HORIZONTE

Belo Horizonte, the capital of the state of Minas Gerais, is the third largest metropolitan area in Brazil, with a population of over 2.4 million. Some 5.7 million people live in the official metropolitan area. It is surrounded by the Serra do Curral mountain range. Since 2001, Belo Horizonte monitors the percentage of days with good air quality: these decreased from 93.5% in 2001 to 66.6% in 2011. Because of this, Belo Horizonte is committed to reducing its emissions to 20% by 2030.

SÃO JOSÉ DOS CAMPOS

São José dos Campos, in the Metropolitan Area of Vale do Paraíba, is between the two most active production and consumption regions in the country: São Paulo and Rio de Janeiro. It has a population of over 600,000 distributed over 353,9 km². It is the most important aerospace industry centre in Latin America, containing many important research and educational institutions, and technology enterprises.

COUNTRY PROFILE: BRAZIL



Population: 206.1 million (2014)[2]
Area: 8,515,770 km²

Image: Luisa Zottis | EMBARQ Brasil

2 http://data.worldbank.org/country/brazil

NEEDS, GAPS AND PRIORITIES

Brazil is Latin America's largest economy and home of the greatest biodiversity on the planet. As the region's largest and most populated country, it has seen a significant growth in its cities over the last decades. The country faces environmental and social challenges driven by economic development and high levels of urbanisation. A growing middle class increased Brazil's energy-related emissions by more than 21% between 2005 and 2010. Already, 85% of the country's citizens reside in cities, with all population growth expected to occur in cities over the next 30 years.

Due to the challenges related to this, Brazil adopted a National Policy of Urban Mobility in 2012. The main objective of this policy is to provide a more efficient mobility system, while improving air quality, reducing congestion and reducing deaths and injuries caused by transport crashes. To deliver on this objective, the development of Sustainable Urban Mobility Plans (SUMPs) has become mandatory for large and medium-sized cities with more than 20,000 inhabitants with a clear target to build more connected, inclusive and sustainable cities. The SUMPs developed by the municipalities must establish goals and guidelines to improve public transport, city logistics, and foster non-motorised mobility.

Belo Horizonte

As part of the SOLUTIONS project, Belo Horizonte is developing implementation plans for non-motorised transport, low speed urban roads (Zones 30), and urban logistics solutions. The Municipal Authority for Urban Policies is responsible for planning and managing urban projects related to public infrastructure, housing, pavements, sanitation and transport. BHTRANS (Empresa de Transportes e Trânsito de Belo Horizonte), a public entity, is responsible, under a mandate from the municipal authority, for managing urban transport and traffic for the whole city. BHTRANS plans, organises, guides, coordinates, executes, delegates and controls the delivery of public services related to urban transport and road traffic, according to federal and state legislation, and contributes to Belo Horizonte's urban planning.

Belo Horizonte has an innovative SUMP, PlanMob-BH, which includes comprehensive measures such as a Bus Rapid Transit (BRT) system and cycling solutions. The city created an Urban Mobility Observatory and a Mobility Council, two important tools of social control that are responsible for providing information and collecting civil society demands for improving mobility. By implementing a BRT system, Belo Horizonte also hopes to revitalise the downtown area, creating pedestrianised streets and giving the space back to people from cars. PlanMob-BH also proposed the development of a Bikeway Network.

Belo Horizonte already has a continuously growing bike-sharing system, Bike-BH, with plans to have 40 stations with 400 bikes

São José dos Campos
São José dos Campos is currently developing solutions for public transport and integrated planning. The municipality leads urban and transport planning in the city and it is currently developing a SUMP, established previously as a mandatory instrument to receive financial aid for projects. The city will soon receive funding from a federal program to accelerate growth. In 2014, as part of the SOLUTIONS project, a set of meetings with technicians, operators and project managers helped identify opportunities and difficulties faced by the teams who are proposing the development of a BRT. These were part of the solutions on public transport and integrated planning, and São José dos Campos is currently pursuing several of the measures with support from the project.

POLICY BARRIERS AND DRIVERS

Because SUMPs are already mandatory planning instruments for cities in Brazil, there is an enormous transferability potential between leading cities and training cities. However, to make this happen properly, the country must strengthen its technical capacity at a municipal level.

SUMPs can significantly contribute to a better and more sustainable urban transport system in Latin American cities. However, experience shows that – given the local conditions – success is more possible if the various mobility-related stakeholders (such as operators, providers, and users) are involved in the planning process. Engaging with citizens is a key component of sound sustainable urban mobility planning. This is one of the relevant topics where some cities in Brazil have conducted best practices.

Reducing CO_2 emissions is an important objective for large and medium-sized cities. There is also an interest in clean vehicles (with an emphasis on biofuel), more cycling and pedestrian infrastructure, and on public transport, especially for bus priority and BRT. Belo Horizonte already has a continuously growing bike-sharing system, Bike-BH, with plans to have 40 stations with 400 bikes. Currently, the city has 72 km of protected bicycle lanes and it intends to add 308 km more by 2030. Belo Horizonte has already pedestrianised two streets in the city centre, which include bicycle lanes and a BRT terminal. There is a clear opportunity to replicate this measure in other areas of the city, and in other cities in Brazil.

In 2014, Belo Horizonte approved the implementation of a Zone 30, supported by the SOLUTIONS project and Bremen. Part of the implementation involved setting a 30 km/h speed limit in dedicated areas, supported by a number of traffic-

By implementing a BRT system, Belo Horizonte also hopes to revitalise the downtown area, creating pedestrianised streets and giving the space back to people from cars

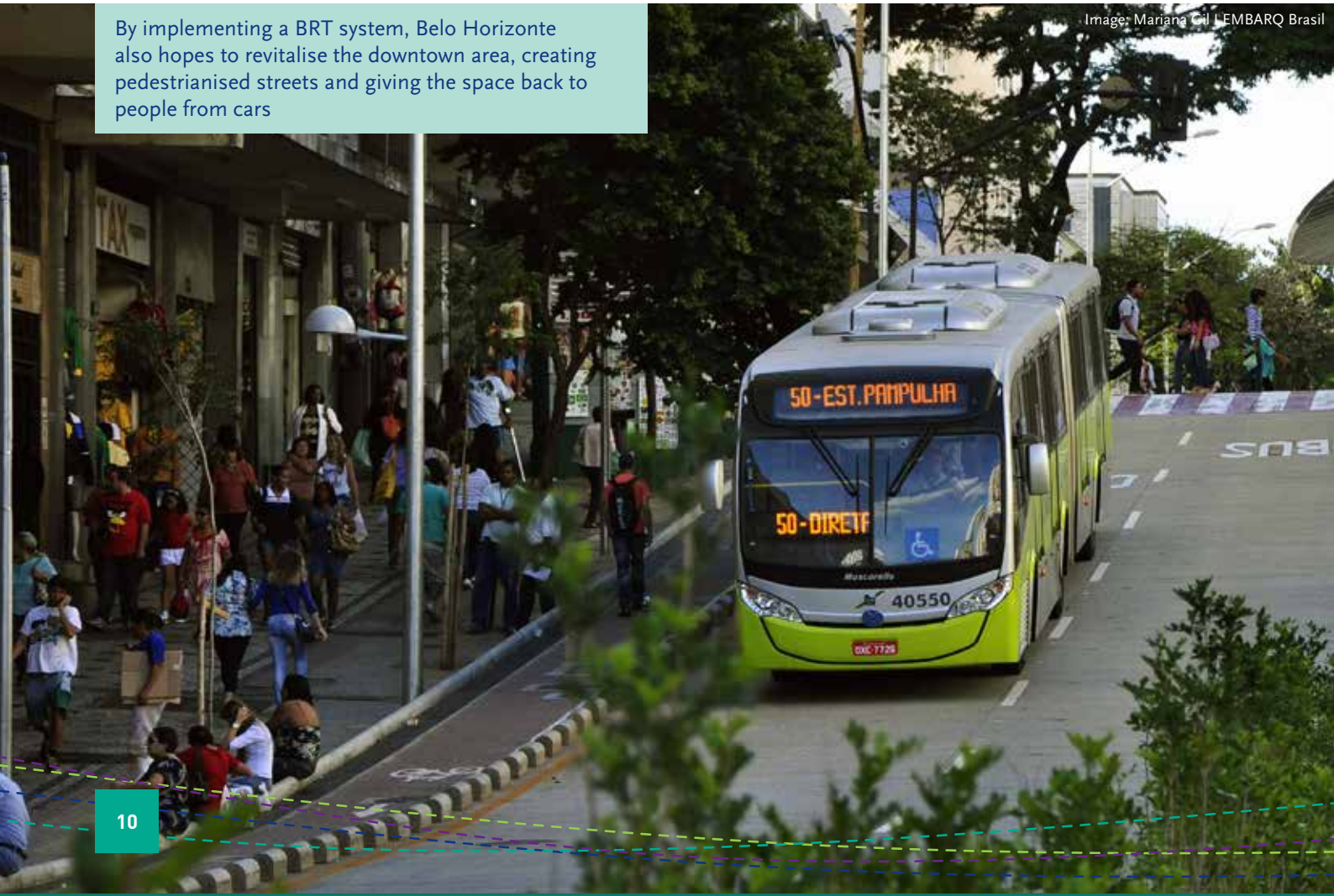


Image: Mariana Gil | EMBARQ Brasil

calming measures. The measure is a pilot of the PEDALA-BH programme, and the city aims to integrate it into the cycling strategy and the network planned in PlanMob-BH.

Since Brazil has regions with rapid growth and often-unplanned urban development, such as in both Belo Horizonte and São José dos Campos, developing a comprehensive SUMP can significantly contribute to a better and more sustainable urban transport system in these cities. National and regional conditions are also very favourable for developing a municipal policy for urban logistics. The main players are the local government and freight carriers, who will have to cooperate on relevant measures. However, there is currently a lack of funding to conduct a thorough assessment of freight transport – which is fundamental to developing a comprehensive policy for urban logistics.

RECOMMENDATIONS AND SOLUTIONS

Belo Horizonte and São José dos Campos may be able to plan more sustainable transport by implementing a SUMP, which the two cities are currently developing. In addition, coordinating and integrating different public transport modes will allow them to address the needs of different users. Zone 30 projects (like the one Belo Horizonte is implementing) and other proposals for cycling networks, like bicycle-sharing systems, may be pivotal in these efforts. It is also important to encourage people to use more non-motorised and public transport. This requires better, more reliable, safe, secure, quick and customer-driven public transport systems (such as BRT).

SOLUTIONS indentifies the following measures for cities in Brazil (most of which cities are already implementing or have implemented):

Measure	SOLUTIONS Factsheet*
Public transport	
BRT systems	1.1
Trolley bus systems	1.2
Metro systems	1.3
Bus priority measures	1.11
Bike-sharing and public bicycles	1.12
Transport infrastructure	
Dedicated bus lanes	2.1
Intermodal interchanges	2.2
Innovative and safe cycling infrastructure	2.5
Pedestrianising city centres and streets	2.8
City logistics	
Low Emission Zones	3.2
Forums, portals, labels and training	3.3
Pick-up point networks	3.4
Vehicle and operation restrictions	3.5
Urban Consolidation Centres	3.6
Integrated planning / SUMPs	
Stakeholder participation	4.1
Monitoring and evaluation	4.4

* SOLUTIONS Factsheets are available on www.urban-mobility-solutions.eu

MEXICO

LA LAGUNA METROPOLITAN ZONE (ZML)

ZML contains four municipalities: Matamoros and Torreón (from the state of Coahuila), and Lerdo and Gómez Palacios (in Durango). The population in this urban area grew by 1.9% from 2000 to 2010 - when it reached 1.2 million inhabitants. Vehicles on the city's public transport routes travel an average of 15 km/h, and an average commute time is over 30 minutes - considered unsatisfactory for a mid-sized city.

DURANGO

The capital of the state of Durango covers an area of 94 km² and has over 580,000 inhabitants. It has a historical centre, with narrow streets, poor pavements and a lack of a main road axis to structure the urban development. Durango has an inefficient road network and poor public transport, provided by polluting buses over 10 years old. Only 39% of residents use public transport. A lack of a non-motorised transport strategy has led to high motorisation, resulting in unsatisfactory congestion for a mid-sized city.

LEÓN

Spanning over 198 k, León is the fifth largest city in Mexico, with a population of nearly 1.4 million people. Regional and national planning for the last 20 years has consolidated the economic dynamic of the municipality by exploiting its geographical location along the industrial corridor linking Aguascalientes, León, Guanajuato, Silao, Irapuato, Celaya, Salamanca and Queretaro.
Despite León being the first city in Mexico to create an integrated transport system, with five BRT lines and a series of complimentary routes, it continues its efforts to strengthen its public transport, at the same time as it consolidates a non-motorised transport strategy. Almost two-thirds of trips in the city are by public transport or non-motorised modes.

COUNTRY PROFILE: MEXICO

Population: 125.4 million (2014)[3]
Area: 1,964,375 km²

Image: EMBARQ Mexico

3 http://data.worldbank.org/country/mexico

NEEDS, GAPS AND PRIORITIES

The second most populated country in Latin America, Mexico has experienced largely unplanned growth over the last decades, and an increasing modal share for private transport. In the past 30 years, housing policy has taken a back seat: the need to address the lack of housing led developers to create disconnected, disperse and distant cities, taking advantage of the low cost of land outside the boundaries of the consolidated urban network. A lack of coordination between transport and urban development planning is responsible for disorganised growth, which the country now needs to address.

In recent years, Mexico has taken significant steps towards modernising public transport in its main cities. Introducing Bus Rapid Transit (BRT) systems in some cities, alongside professional transport operators (which, in many cases, were private operators) changed transport standards and structures related to how Mexican cities plan, manage and operate mass transport. Nevertheless, these systems coexist with thousands of obsolete, uncomfortable, unsafe and highly polluting vehicles - a result of an owner-operated and fragmented model of operation.

The main problem in Mexican cities is private cars are increasing by 4% a year. If this rate continues, in 2030 cities like León will have about 1 million private vehicles, and worse congestion and air quality. This scenario applies mostly to cities in the northern part of the country, where motorisation rates are higher and there are still policies oriented towards private cars.

POLICY BARRIERS AND DRIVERS

Mexico has taken several important steps towards sustainable mobility in recent years, such as creating a Federal Program for the Support of Mass Transport (PROTRAM), which has pushed forward the modernisation of urban transport in the country's main cities. Furthermore, the National Strategy for Sustainable Urban Mobility promoted by the Agriculture, Territory and Urban Development Ministry (SEDATU) links policies and sustainable mobility programmes with urban development strategies. This drive to develop integrated public transport systems represents a radical change in the way Mexican cities move and are built.

Part of the requirements established by PROTRAM for cities to qualify for funding is a Sustainable Urban Mobility

Introducing BRT systems changed transport standards and structures related to how Mexican cities plan, manage and operate mass transport

Plan (SUMP). Cities have advanced on this task, but there are a number of shortcomings, such as strengthening the institutional capacity on technical issues to elaborate, implement, evaluate, analyse and monitor a SUMP. Some cities have created autonomous municipal planning agencies (IMPLANs) to address the lack of continuous development plans, and the need of a technically solid institution, which is above the political cycle. This is good practice in the cities where an IMPLAN operates, providing comprehensive development plans with a long-term vision, and structuring land-use exploitation in an orderly manner.

One of the most important components Mexico needs to enhance is institutional arrangements - for example, creating financially and institutionally solid transport agencies in charge of public transport planning, regulation, operation and monitoring. The transition is not easy. It requires creating institutional, ad-hoc legal frameworks, and financing mechanisms to guarantee the stability of transport systems, while keeping high service quality levels.

At the same time, the short administration period of municipalities – after which decision-makers change - means they must complete projects quickly. To tackle this, state administrations with six-year terms must lead and coordinate with municipal bodies and organisations to conclude long-term mobility projects. This situation applies to most Mexican cities (León is one exception), where the state is responsible for planning and coordinating of transport.

The state of Durango, for example, leads two projects: one for the capital city of Durango, and one for the ZML. Durango's SUMP aims to increase the productivity and quality of public transport, and restructure its routes, while reorienting urban development to a more sustainable model. Crucially, the federal government supports the project, making it more feasible due to the financial implications of federal support.

ZML has significant interest in developing a BRT system for the Laguna corridor. As municipalities from two different states compose ZML, the biggest barrier is finding a solution compliant with different legal and political systems and verifying the definitive operational scheme.

For example, in both of the SOLUTIONS cities (León and Durango) and most other Mexican cities, public transport receives no subsidies. As such, fares must recover all operational costs. This makes it very difficult for owner-operated bus service providers to generate sufficient funding to renew, improve or upgrade their fleets. This links to the fact that most states build current institutional and legal frameworks for owner-operated buses. There is a general institutional issue in most metropolitan areas, including Mexico City, where territorial borders and institutional responsibilities represent a clear disruption for urban travel. This has even led to the discussion around the creation of metropolitan governments to manage different services properly, such as water distribution, waste disposal, public security, the police, or mobility planning.

Image: EMBARQ Mexico

SOLUTIONS AND RECOMMENDATIONS

A large number of cities are already evaluating the transformation of public transport using PROTRAM's financial support - yet the country should take a step back. While Mexico should strengthen institutional and legal frameworks to provide high quality public transport services, solid financial schemes to ensure that public transport investments are financially sustainable should follow. In this regard, as part of the SOLUTIONS project – in which León was paired with Brazil's Curtiba - the timeline of the project unfortunately did not allow the former to draw on the latter's experience and knowledge on subsidy schemes.

The short period a municipal administration has in office is a big barrier to address. This may lead to designing and implementing immediate but not effective, car-oriented solutions, which – in the worst case – results in more cars on the road, worsening the mobility patterns in Mexican cities. In this regard, SOLUTIONS highly recommends continuing to strengthen agencies such as IMPLAN, which have shown to be quite successful at providing long-term planning instruments to consolidate urban development and transport planning in a comprehensive manner. As seen in the SOLUTIONS project, the feasibility and applicability of mobility solutions relies significantly on technically competent planning agencies, which can put together long-term plans such as SUMPs.

It was not possible to implement a solution in León, as the political scenario shifted many times, by which time priorities initially established changed twice. These modifications could not be properly adapted into the cycle of the SOLUTIONS timeline. However, because air quality in León has worsened in recent years, one of the recommendations from SOLUTIONS was to evaluate switching to more energy-efficient and cleaner fuels for public transport (currently most buses run on EURO IV ULSD technology) and to consider electric vehicles for logistics. This requires financial incentives, as electric vehicles have unacceptably high investment costs in most Latin American countries. On this last issue, it is important to note that logistic vehicles in Mexico are regulated on a federal level.

Durango, one of the SOLUTIONS training cities, is currently improving its SUMP, which could over the years be implemented with solutions such as non-motorised transport, bike-sharing systems and public transport solutions (with BRT lines possibly being one of them). Other measures Mexican cities could implement, depending on local conditions, include:

Image: Male Gringo I Flickr I CC BY-NC 2.0

Durango's lack of a non-motorised transport strategy has led to high motorisation, resulting in unsatisfactory congestion for a mid-sized city

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Public transport	
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Integrated planning/SUMPs	
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Monitoring and evaluation	4.4

* SOLUTIONS Factsheets are available on www.urban-mobility-solutions.eu

CONCLUSIONS

The main problem Latin American cities need to address is the rapidly growing demand for cars, commonly linked to urban development which is disconnected, disperse and distant from the consolidated urban areas. Newly incorporated policies in Mexico and Brazil include the development of SUMPs that will define the way cities must configure themselves to prioritise public transport. Combined with non-motorised transport and freight solutions, this can improve urban mobility. Some of the areas of opportunities or barriers identified by the cities participating in SOLUTIONS, whether they were the take-up cities or cities in training, include:

Strengthening processes
In Mexico and Brazil, cities receive federal financial support to implement sustainable urban mobility solutions. This process needs to be continuously improved to set standards, provide guidance and monitor implementations in cities.

Strengthening capacity
One of the identified needs within municipalities is the continuous capacity-building processes to push planning agencies to develop, implement and evaluate mobility solutions. This issue responds to the fact that technical agencies are newly staffed following the start of every new municipal administration. Creating autonomous municipal agencies with overlapping administrations can solve this.

Strengthening institutions
Having strong agencies in charge of planning, operating and monitoring urban mobility would lead to cities being able to manage urban mobility in a more orderly manner.

In both countries, the SOLUTIONS project led take-up and training cities to live and experiment the implemented solutions. This strengthened knowledge though the exchange of techniques, processes, ideas and - most importantly - from lessons learned through various mistakes.

SOLUTIONS Factsheets

The SOLUTIONS Factsheets examine a number of sustainable urban mobility measures and include a case study on cities that have successfully implemented them.

To see the database of factsheets, go to
www.urban-mobility-solutions.eu/resources/factsheets

SOLUTIONS Network

The SOLUTIONS Network keeps alive the valuable collaborations on sustainable urban mobility created during the SOLUTIONS project and helps deliver on the UN's Sustainable Development Goals, the Paris Agreement and the New Urban Agenda.

It will broaden the original project's partnerships by inviting additional organisations that are working on implementing sustainable urban mobility actions across the world, link their activities to boost their impact, and also create new partnerships to develop targeted concepts and pilot projects for sustainable urban mobility solutions.

To join or to find out more about this exciting new initiative, please contact the SOLUTIONS project coordinator, Oliver Lah: oliver.lah@wupperinst.org

SOLUTIONS: Sharing Opportunities for Low carbon Urban transporTatION

Website: www.urban-mobility-solutions.eu

Facebook: www.facebook.com/SOLUTIONSproject
Twitter: @SOLUTIONS_EU
YouTube channel: SOLUTIONS Project

PARTNERS

The SOLUTIONS project consortium, consisting of partners from all over the world, brings together a wealth of experience and know-how from organisations, consultants, cities, research and technical experts involved in transport issues and solutions.

CLEAN AIR ASIA
bast Federal Highway Research Institute
FEHRL
Mobili-T
TRANSPORT RESEARCH CENTRE
HELLENIC INSTITUTE OF TRANSPORT
AVERE
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