

Ministry of Foreign Affairs

Urban Mobility in Colombia

Commissioned by the Netherlands Enterprise Agency

>> Sustainable. Agricultural. Innovative. International.

Urban Mobility in Colombia

Business Opportunities for Dutch Companies

September, 2020

Research Conducted by:







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• Chapter 1: The Urban Mobility Ecosystem

• Chapter 2: Key elements of Urban Mobility

• **Chapter 3:** The Present and Future of Urban Mobility in Colombia

• **Chapter 4:** Turning GAPS into business opportunities



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Chapter 1: The Urban Mobility Ecosystem

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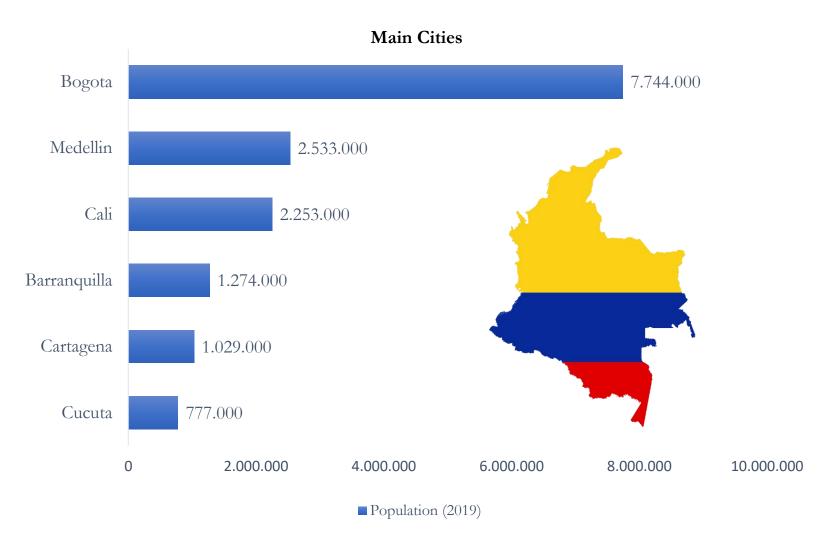


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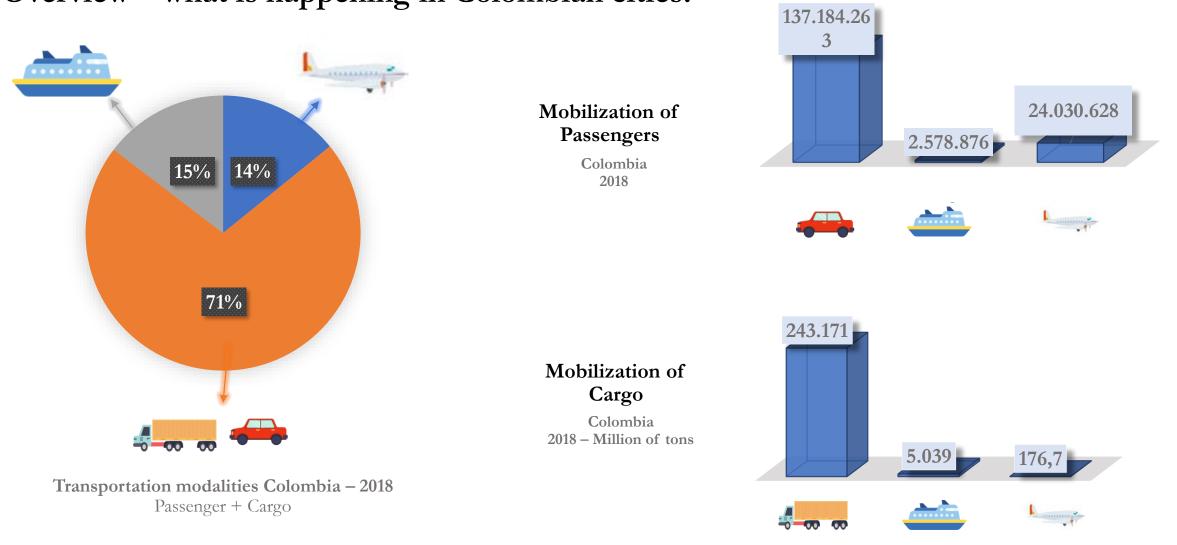
Key Facts - Colombia

- Total Area: 1.141.748 km2
- Population: 50.000.000 (2019).
- Labor Force: 22.200.000 (2019).
- GDP: USD \$340,7 billions (2019). 3,3% growth from 2018.
- GDP Per Capita: USD \$6.836 (2019). 3,2% growth from 2018.
- Inflation: 3,8% (2019).
- Unemployment: 10,5% (2019).
- Total Exports: USD \$39,5 billions (2019).
- Total FDI: USD \$14,58 billions (2019).
- Doing Business: 67/190 (2020).



Government of the Netherlands





Overview – what is happening in Colombian cities?

Ministerio de Transporte, 2018.

Pg.3



Selected Cities for the study

Main cities in the country, located in different regions.

These cities are pioneering in mobility innovation and have clear goals for the next few years in sustainable mobility.



Bogotá



Pereira



Medellín



Barranquilla



Pasto

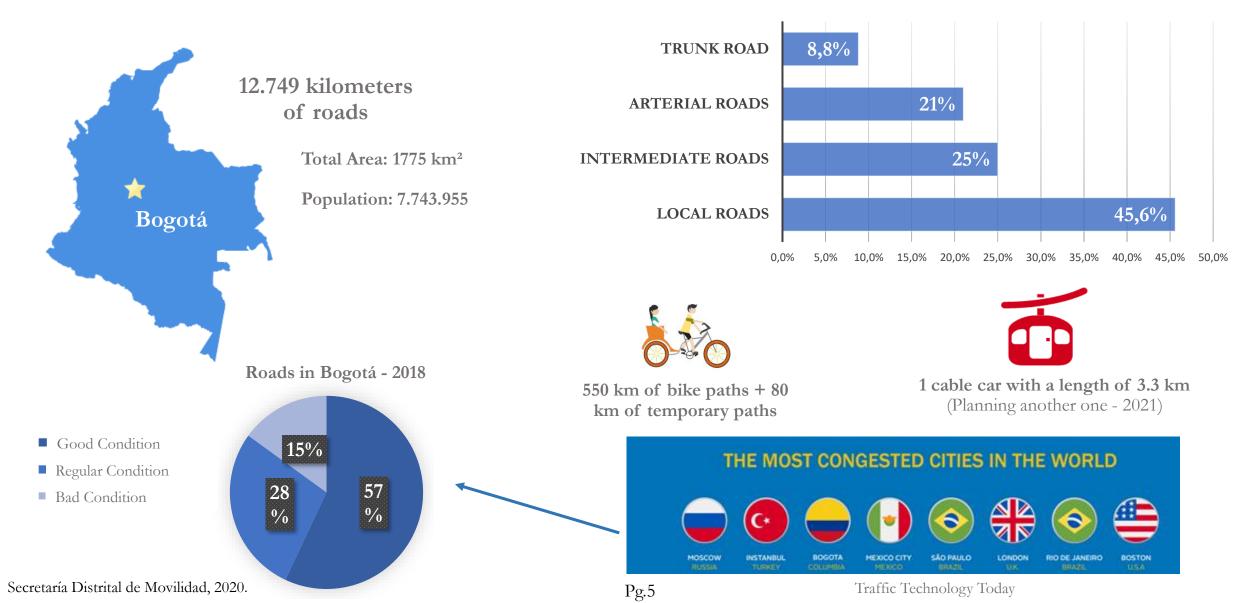


Bucaramanga

Pg.4

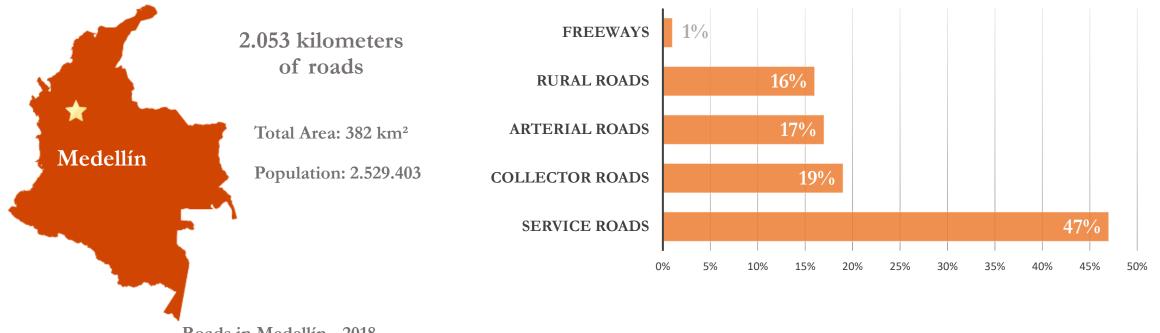


Overview – what is happening in Bogotá?





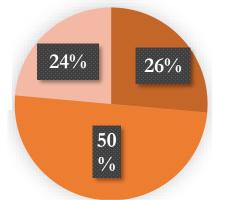
Overview – what is happening in Medellín?



Roads in Medellín - 2018

Good Condition

- Regular Condition
- -Bad-Condition





29 km of bike paths



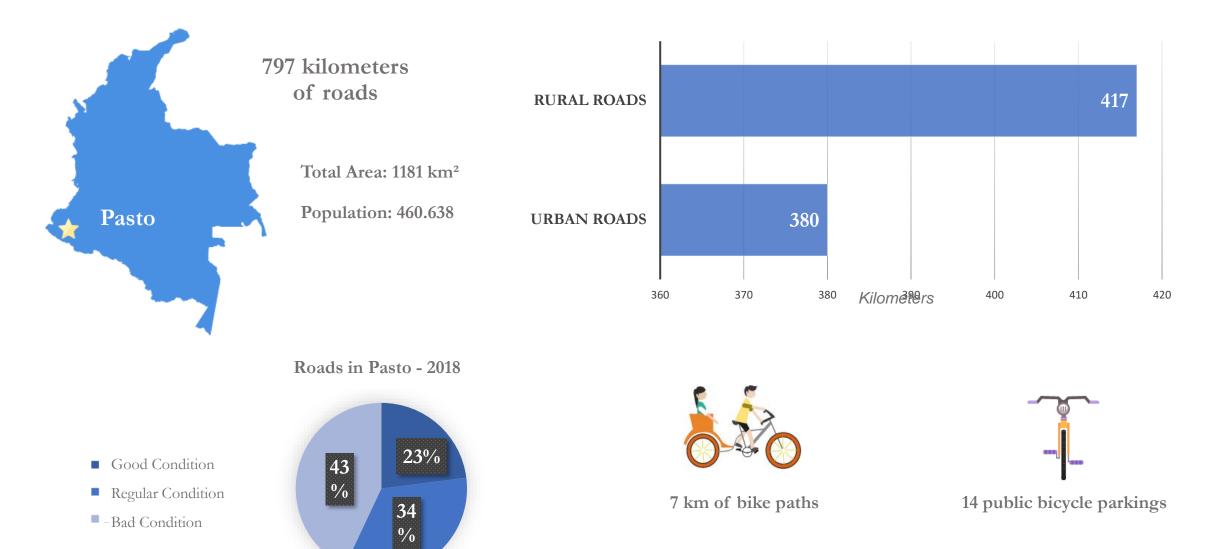
Metro System 28.8 km and 27 distributed stations



Cable car with 14.7 km in length



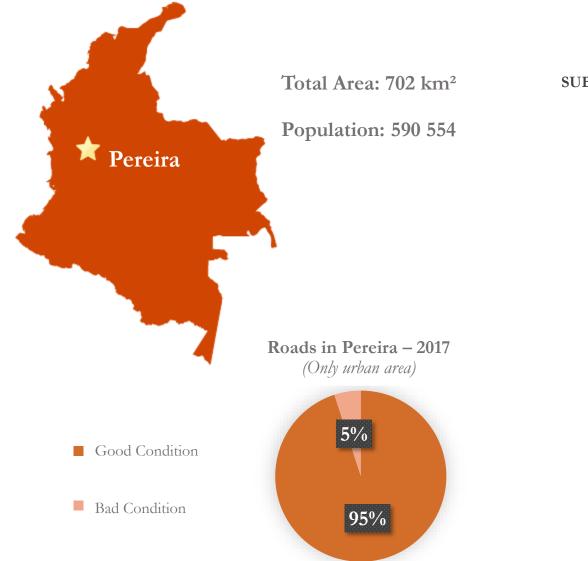
Overview – what is happening in Pasto?

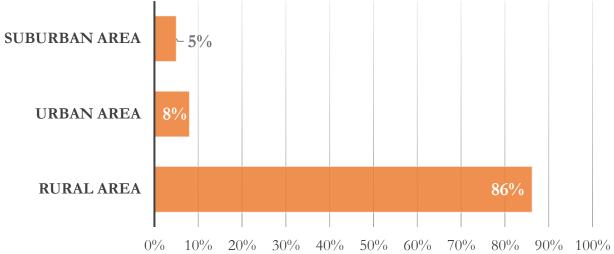


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Overview – what is happening in Pereira?







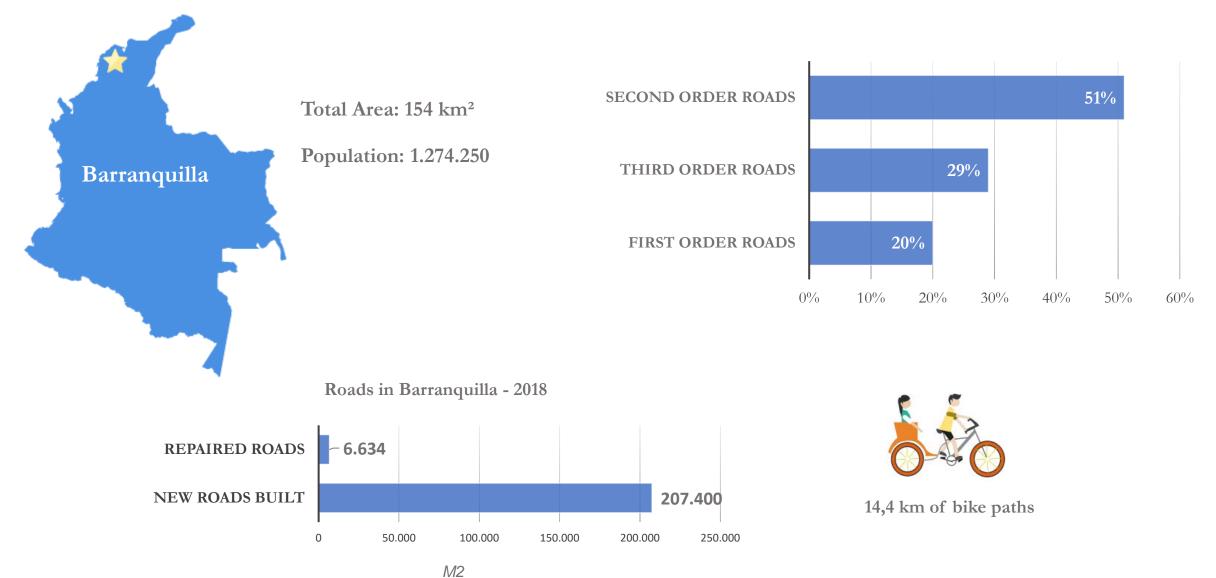
17 km of bike paths



Public Bicycles System



Overview – what is happening in Barranquilla?

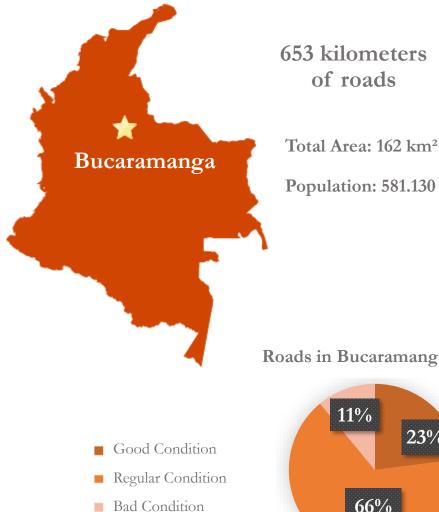


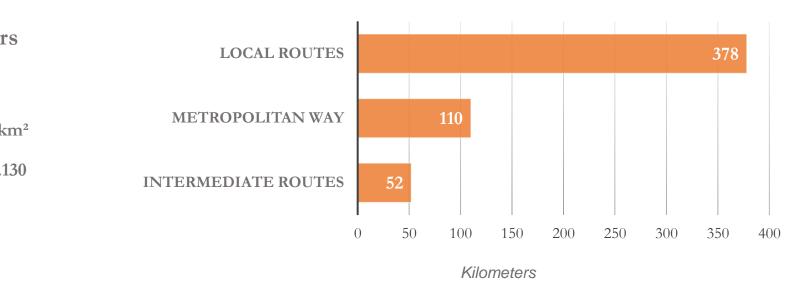
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Alcaldía de Barranquilla, 2017

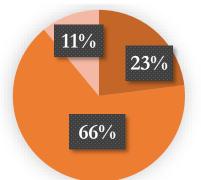


Overview – what is happening in Bucaramanga?





Roads in Bucaramanga – 2018



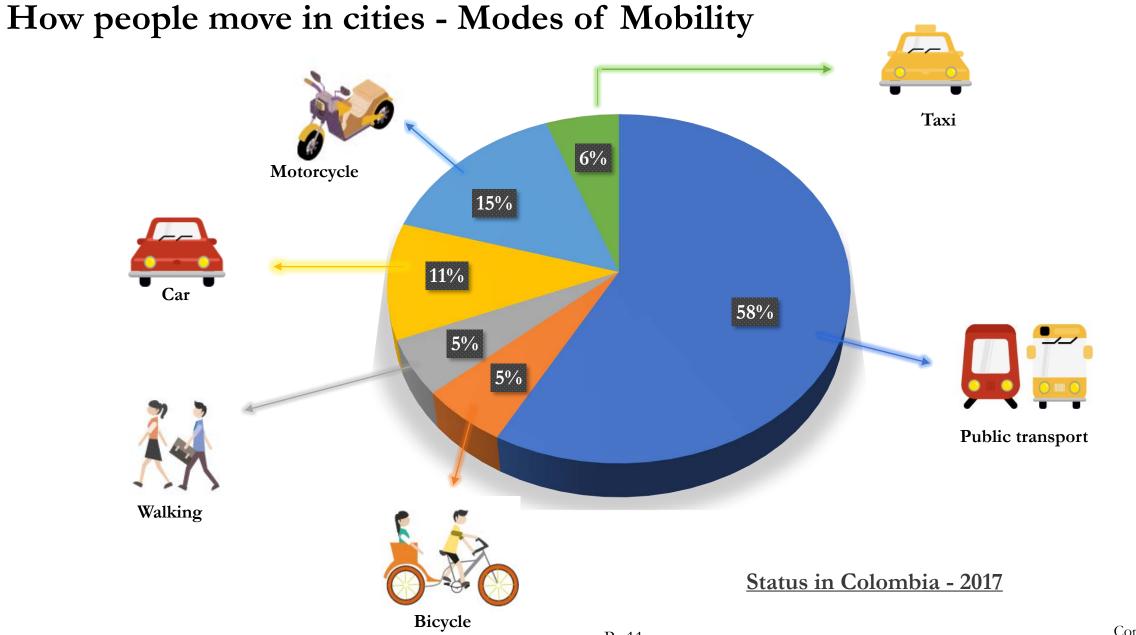


2,6 km of bike paths



3% of total roads are bike paths

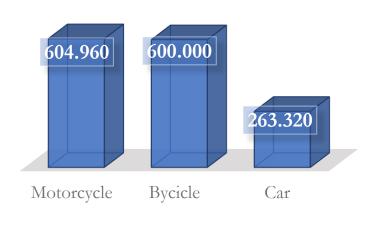






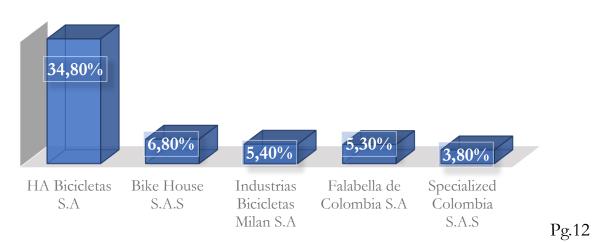
How people move in cities - Modes of Mobility

Interesting vehicle indicators

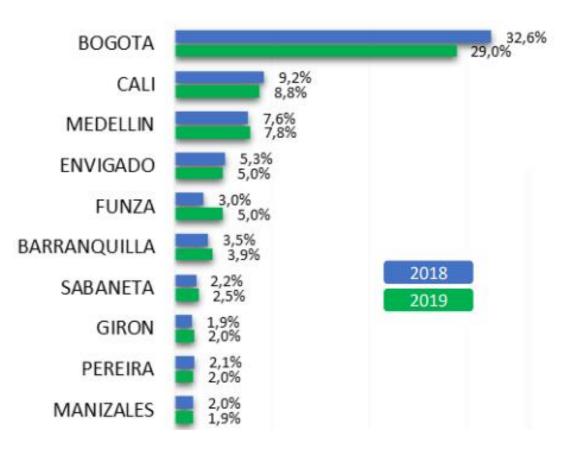


Units sold in Colombia - 2019

Biggest Bycicle Importers - 2019

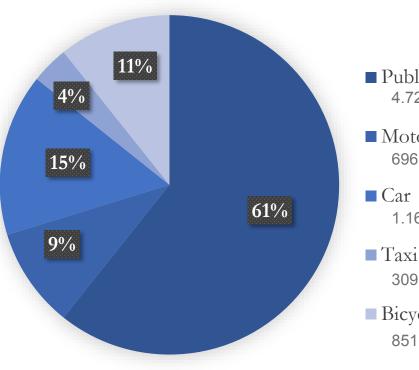


Market share per city (cars) – 2019

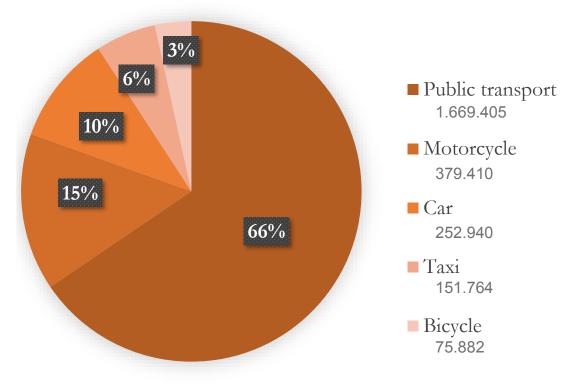




How people move in selected cities



- Public transport 4.723.812
- Motorcycle 696.955
- 1.161.593
- Taxi 309.758
- Bicycle 851.835

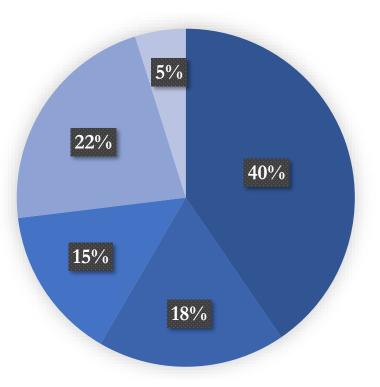


Bogotá 7,743,955 inhabitants

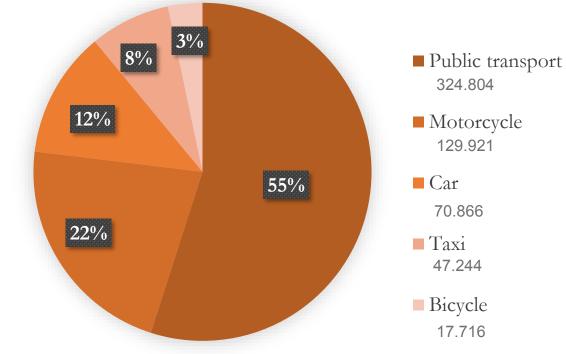
Medellín 2.529.403 inhabitants



How people move in selected cities







Pereira 590.554 inhabitants

Walk

184.255

82.914

69.095

101.340

23.031

Taxi

■ Motorcycle

Car

■ Public Transport



302.187

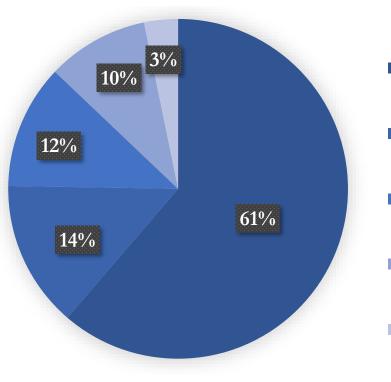
151.093

81.358

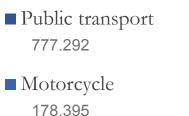
40.679

5.811

How people move in selected cities



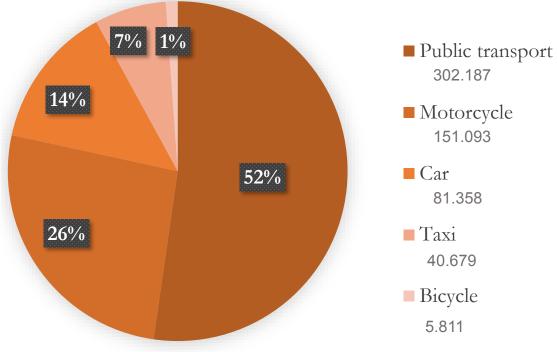
Barranquilla 1.274.250 inhabitants



Car 152.910

Taxi 127.425 Bicycle

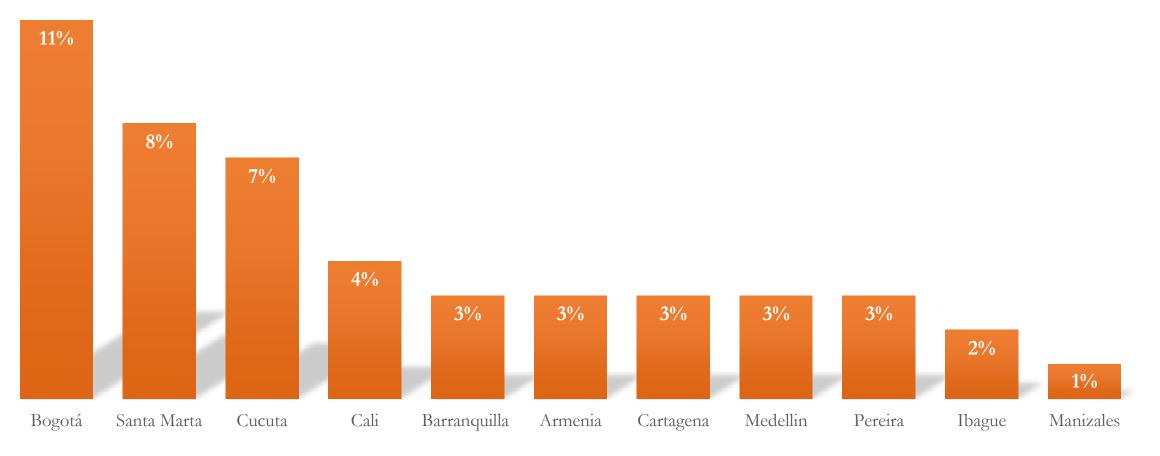
38.227



Bucaramanga 581.130 inhabitants

Sustainable transport used in cities – Bicycle

Comparison between cities in Colombia regarding the use of bicycles. Percentage of use of bicycle for transport in cities.



Pg.16





Plans for mobility in selected cities

Bogotá https://bit.ly/3fQmdLL	 Reduce by 20% the number of fatalities from road accidents . Increase validations in the SITP by increasing the reliability of the SITP service in its core by 25% and increasing zonal components by 4%. Define and implement two strategies of citizen culture for the mobility system, with a differential, gender and territorial focus. Define and implement an instrument for measuring and monitoring the user experience and service provider in individual public transport. Decrease the average time in minutes of access to Public Transport by 10%. Formulate and implement a comprehensive strategy to improve the quality of regional urban public transport. Start the construction of one cable car. Maintain the average travel time in the 14 main corridors of the city for all road users. Improve the infrastructure associated with the SITP.
Medellín <u>https://bit.ly/341ptSj</u>	 Mobility Program with cleaner technologies and new trends. Walkable and pedalable Medellín program. Smart Mobility and Technological Innovation Program. Infrastructure Program for sustainable mobility. Education, road culture and safe mobility program.
Pasto <u>https://bit.ly/2XYZMOG</u>	 Mobility Master Plan: Implementation of the SETP. Road safety plan: Alternative and sustainable mobility - active mobility - awareness of road actors - Effective control of city traffic and transport. Pedestrian prioritization. Modernization of the road network: Rural intercommunication.



Plans for mobility in selected cities

Pereira <u>https://bit.ly/30TLGzN</u>	 More culture for mobility. More bicycle routes, better mobility. More streets between neighborhoods. Integrated and multimodal public transport.
Barranquilla <u>https://bit.ly/2Y0stul</u>	 The development of sustainable transport infrastructure and new alternatives that allow taking advantage of the geographical situation. Improvement of the current conditions of the modes of transport and citizen culture that allow a more competitive city in logistical terms. Use of technological alternatives for traffic management. An effective separation of pedestrian, motorized and non-motorized modes of transport.
Bucaramanga <u>https://bit.ly/31TL7oO</u>	 Implement a program to reduce the SITM operational deficit. Implement a digital tool (APP and/or web) that allows system users to carry out efficient travel planning. Formulate an integrated strategy of complementarity, multimodality, inclusion of buses (low or zero emissions) and required sustainable infrastructure. Evolve in a strategy for Bicycles.

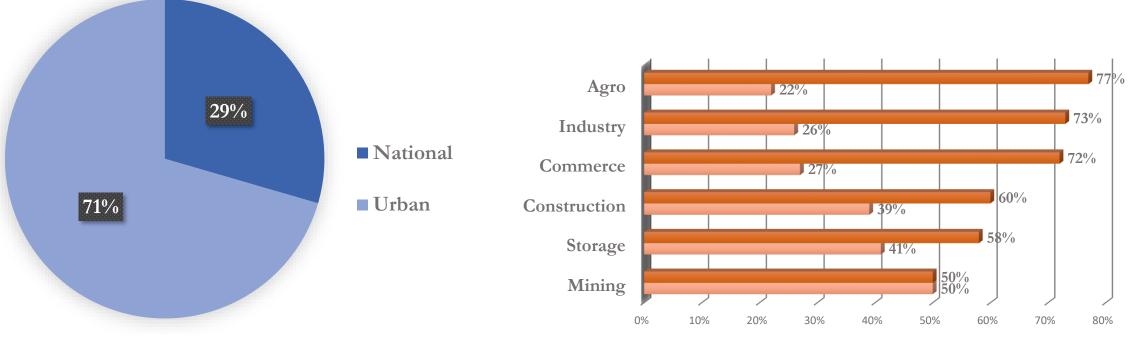


How things move in cities – Urban Logistics

Transport and logistics in Colombia

Transport and logistics in Colombia

Logistics x sector



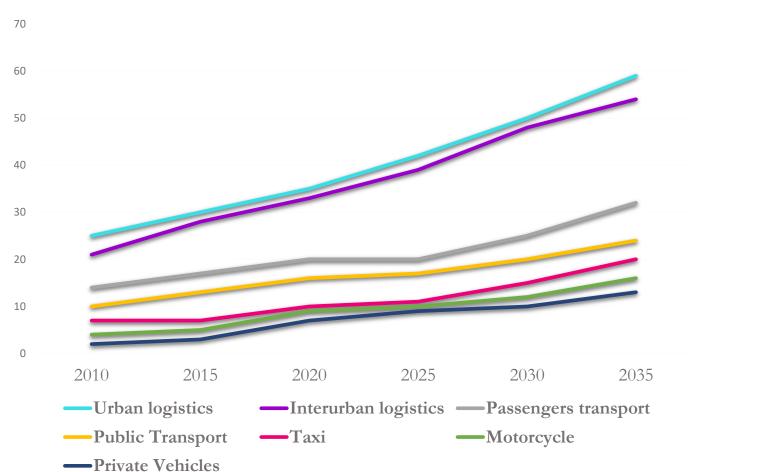
Urban National





How things move in cities – Urban Logistics

CO2 emissions associated with transport



It is estimated that Colombia loses about 2% of the Gross Domestic Product (GDP) per year due to the effect of congestion in cities.



At the time of entering the cities, cargo vehicles see their average speed reduced from 50 km/h to 10 km/h, which affects the productivity of the transport mode.

Chapter 2: Key elements of Urban Mobility

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Traffic management concepts and systems in Colombian cities

<u>TRAFFIC</u>

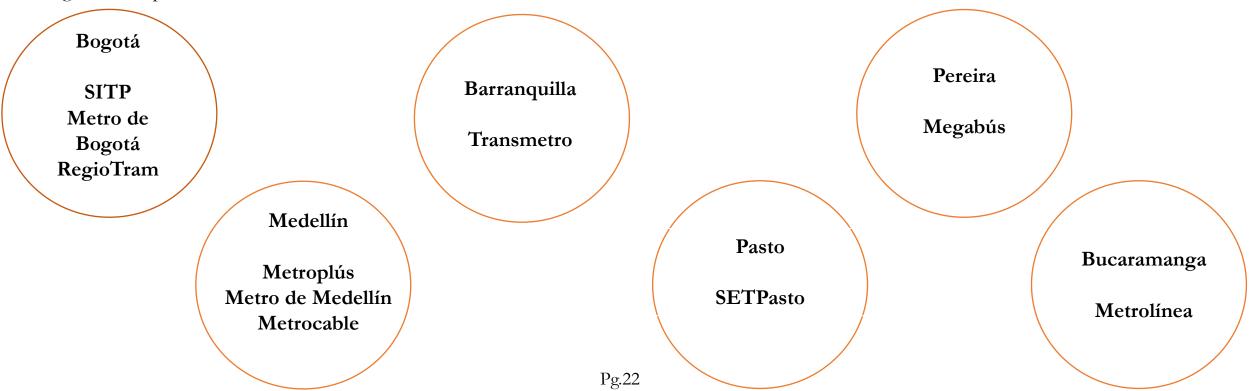
According to Article 2 of the National Traffic Code, Law 769 of 2002, it is defined as: Volume of vehicles, pedestrians, or products that pass through a specific point during a certain period.



TRANSIT

According to article 2 of the National Traffic Code, Law 769 of 2002, it is defined as: It is the mobilization of people, animals or vehicles on a public or private road open to the public.

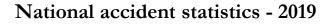


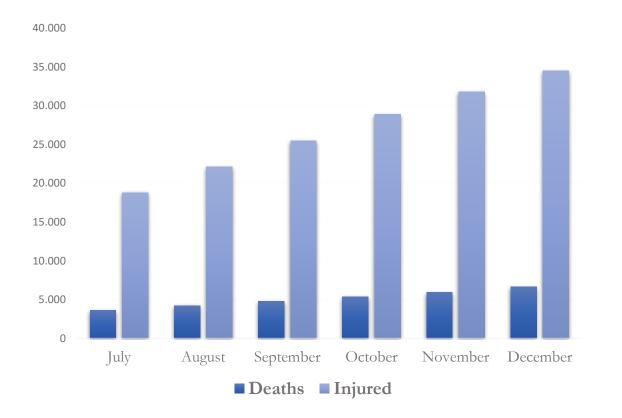




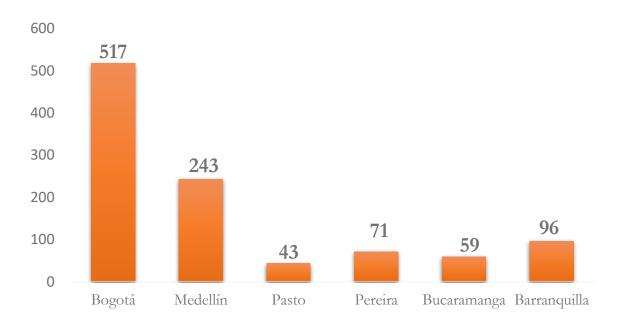
National accident statistics - 2019

Per month





Per city



Deaths

Total Deaths for 2019 in Colombia: **6.634** Total Injured 2019 in Colombia: **34.485**

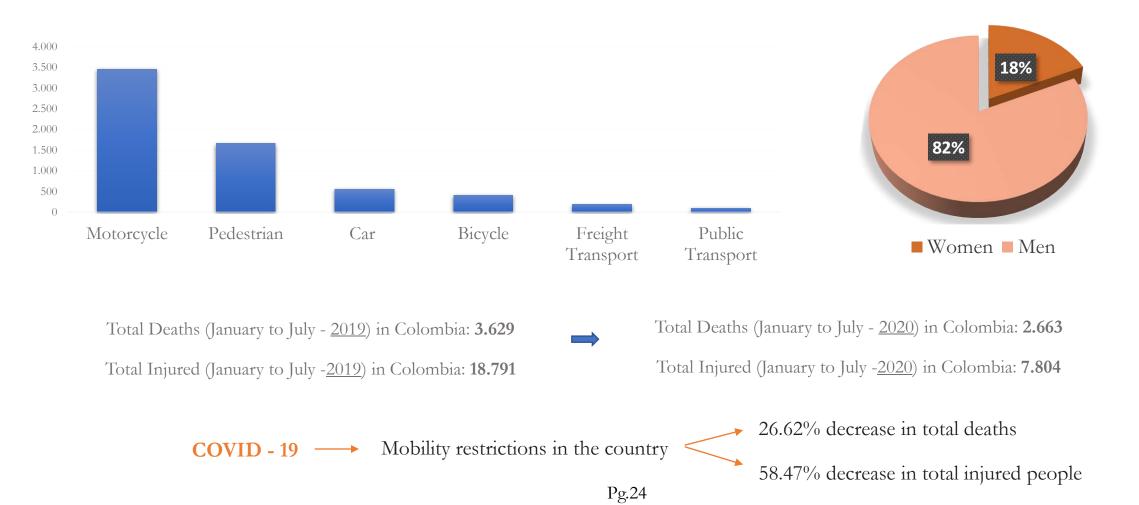


National accident statistics - 2019

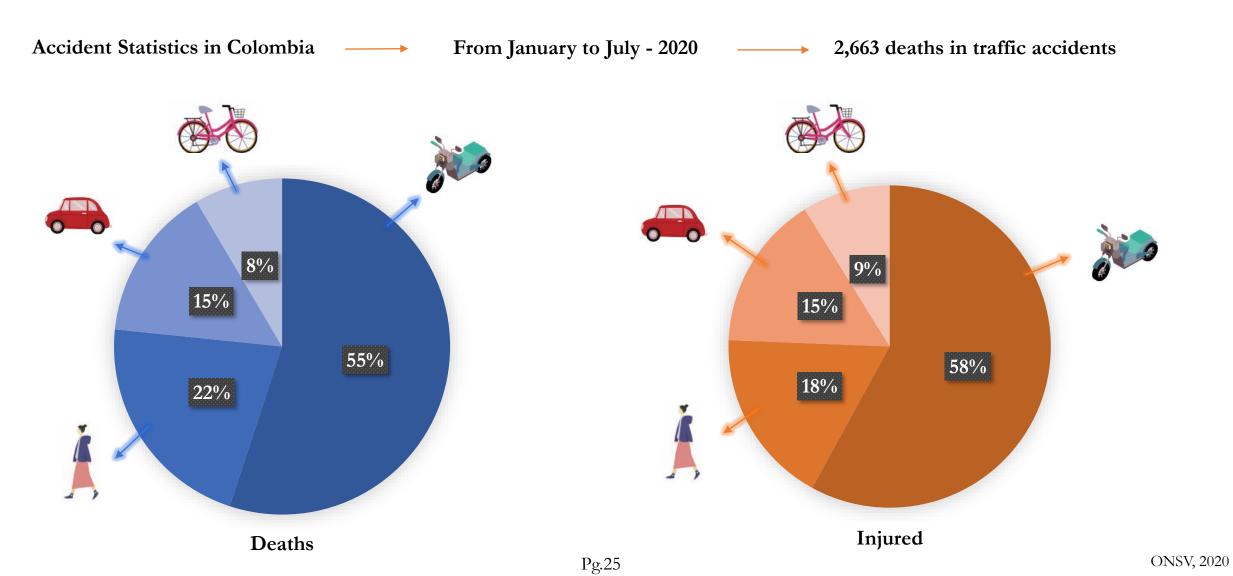
Deaths x Modality

National accident statistics - 2019

Deaths x Gender









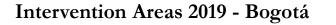
Human Behavior

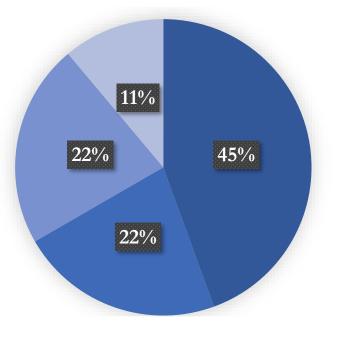
■ Safe infrastructure

Attention to victims

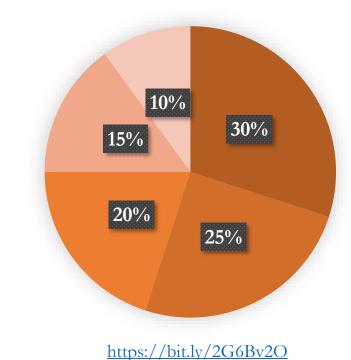
Safe vehicles

Plans for Safety and Security in Selected Cities





https://bit.ly/2De2Y1t



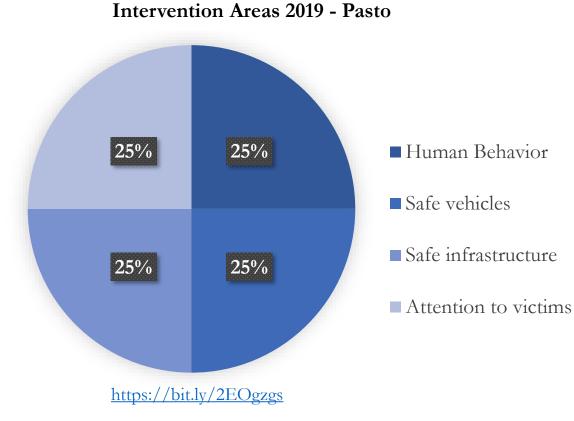
Intervention Areas 2019 -Medellín

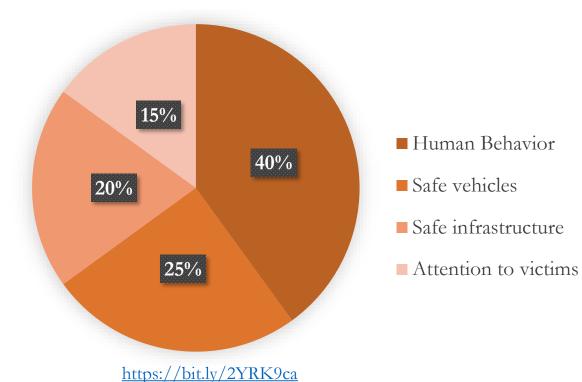


Attention to victims



Plans for Safety and Security in Selected Cities





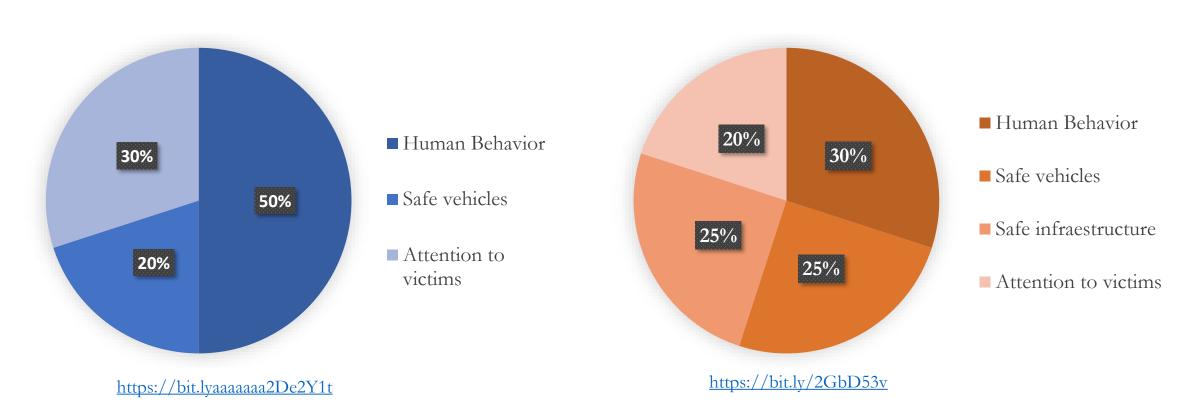
Intervention Areas 2019 - Pereira



Plans for Safety and Security in Selected Cities

Intervention Areas 2019 - Barranquilla

Intervention Areas 2019 - Bucaramanga



Chapter 3: The Present and Future of Urban Mobility in Colombia







Government of the Netherlands





The key players – Stakeholders → *National Public Sector*

MinTransporte Ministerio de Transporte	Ministry of Transport		District Planning Secretary Local character
	National Institute of Roads -	DNP Departamento Nacional de Planeación	National Planning Department - DNP
	INVIAS National Infrastructure Agency - ANI	MinMinas Ministerio de Minas y Energia	Ministry of Mines and Energies
Agencia Nacional de Infraestructura			Mobility Secretariats Local character
Agencia Nacional de Seguridad Vial	National Road Safety Agency - ANSV	El ambiente es de todos Minambiente	Ministry of Environment and Sustainable Development
SuperTransporte	Transportation Superintendency - SUPERTRANSPORTE		Academy

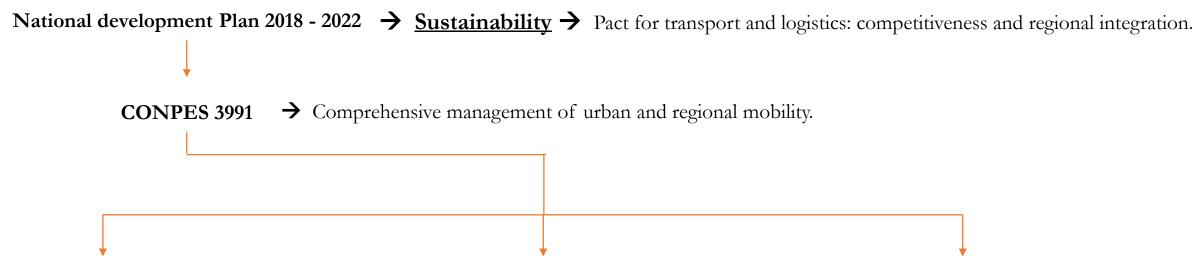


The key players – Stakeholders → Private Sector

SITP	SITP (sistema Integrado de Transporte Público)	C	Cámara de Comercio de Bogotá	Transport and Mobility cluster of the Bogotá Chamber of Commerce
	Consulting companies (Despacio, Calymayor, Fundación Ciudad Humana, NUMO)	A	NDI MÁS NDI PAÍS	National Association of Entrepreneurs of Colombia (ANDI)
	Logistics transport companies (Servientrega, DHL)		PUERTA DE CESARROLLO CARIBE	Puerta de Oro Barranquilla
5	Construction companies of last mile light vehicles (Pargal, Bogbi, lola)		Renting Colombia	Renting Colombia
Cluster Energía Sostenible Medellín y Antioquia	Electric Mobility Cluster of Medellín	Ir	nvest in Bogota	Investing Agencies (Invest n Bogotá, Invest in Medellín)
Cámara de Comercio de Bogotá	Electric Mobility Cluster of the Bogotá Chamber of Commerce		Î	Chamber of Commerce Local character



Regulatory Framework in Colombia / Policies



Comprehensive mobility, which will seek to address issues such as road safety, congestion and pollution.



Strengthening of local and national levels in planning, execution and control of the strategies to be implemented.

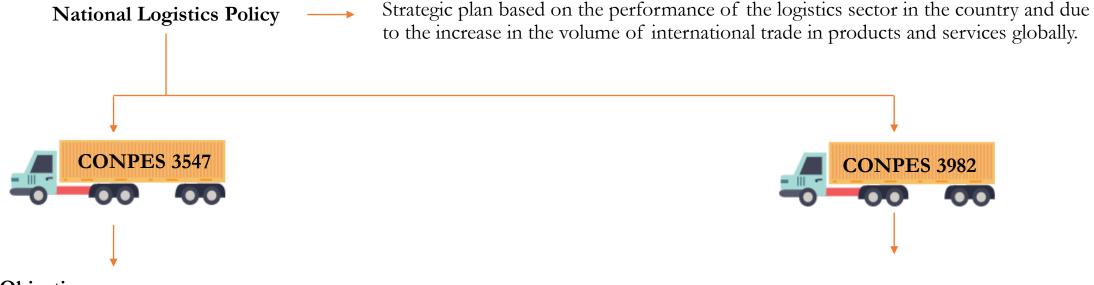


Better manage the financing and sustainability of public transport systems and their quality. The Policy will have COP\$ 12,460 million as a budget.





Regulatory Framework in Colombia / Policies



Objectives:

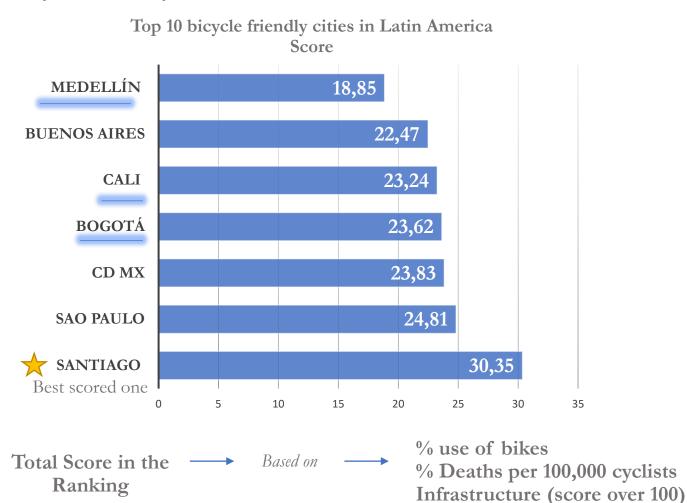
- Create an institutional environment
- Generate logistics information
- Articulate logistics corridors
- Promote the facilitation of foreign trade
- Promote the use of ICT at the service of logistics
- Promote the provision of quality services in logistics and transport

Objectives:

- Promote intermodality through the development of competitive transport modes
- Promote trade facilitation through optimization of operations and infrastructure
- Design institutional coordination mechanisms, access to information and promote the use of ICT



Bicycle mobility



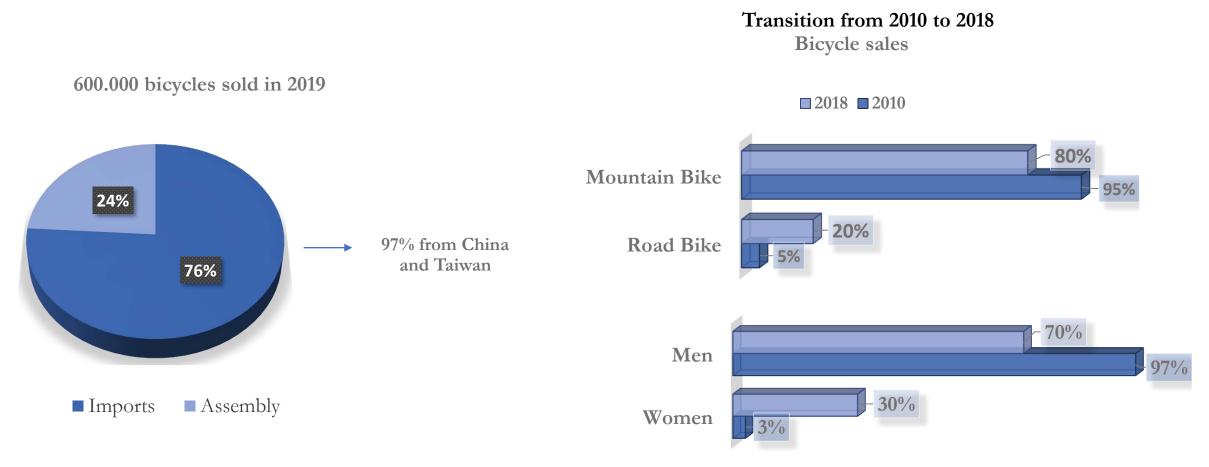


Colombia is the only country with 3 cities in the ranking

Bogotá is the city in Latin America with the largest number of kilometers of bike paths



Bicycle mobility







Bicycle mobility

High and mid-high range bicycles



Road Bike Prices: COP \$1.000.000 - 2.500.000 USD \$275 - \$685



Mountain Bike Prices: COP \$1.500.000 - \$30.000.000 USD \$415 - \$8.300





of sales in this sector



Brands that have 80%

Low and mid – low range bicycles



Road Bike Prices: COP \$1.000.000 - 1.500.000 USD \$275 - \$415



Mountain Bike Prices: COP \$500.000 - \$1.500.000 USD \$140 - \$415



Brands that have 80% of sales in this sector

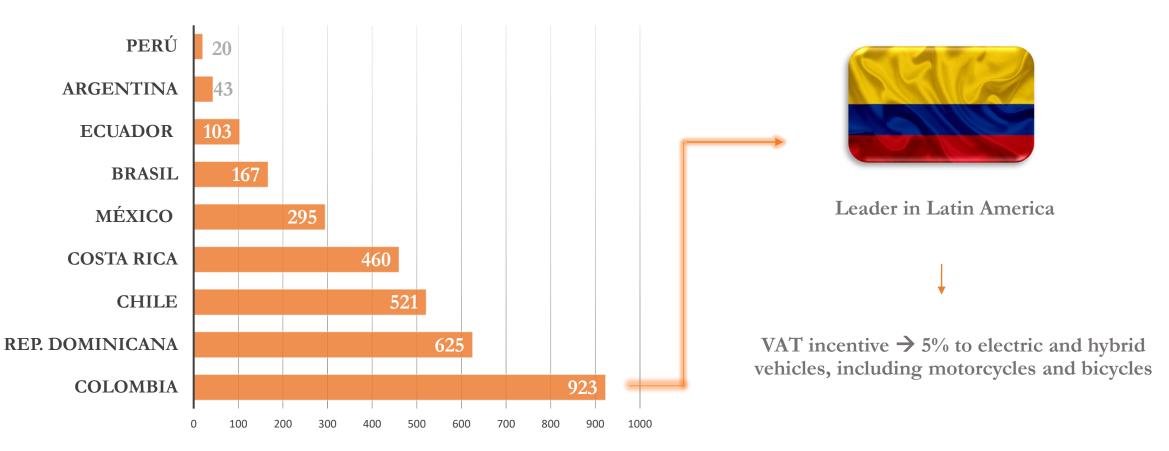


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<u>E – Mobility</u>

Number of registered electric vehicles - 2019





<u>E - Mobility</u>

TOTAL

Sales of Electric Cars - 2019

2019

1.772

HEV Hybrid electric vehicle

Var.

561,2%

Sales of Electric Motorcycles - 2019

		Ranking		2018	2019	
PHEV Plug-in hybrid electric vehicle		1	STARKER	1.021	2.049	100,7%
		2	NIU	2	78	3800,0%
		3	AIMA	1	56	100,0%
	Var.	4	ENERGY MOTION	20	41	105,0%
2019		5	BIN		11	100,0%
		6	ELEKTROMOTORES	20	10	-50,0%
439	60,2%	7	ELECTRIKA	77	10	100,0%
		8	BENLG	0	9	100,0%
		9	ZP	0	7	100,0%
		10	QSMOTOR	0	5	100,0%
		11	SPORT POWER NEW/ELECTRIKA	0	5	100,0%
		12	SUNRA	5	4	100,0%
		13	UNITEC USA	0	4	100,0%
		14	STÄRKER	0	4	100,0%
			Otras	22	19	-13,6%
		Total		1.168	2.312	97,9%

Brands



BEV

Battery electric vehicles

Var.

136,7%

2019

923









The "new" way of urban logistics in Colombia : Electric Light Vehicles

According to the most recent report of the National Association for Sustainable Mobility (Andemos), as of March 2019, 403 vehicles of this type were registered in the country, 291.3% more than in 2018.

Companies in Colombia such as:



Some of these firms have started to add electric vehicles to their fleet or are working on a pilot with these types of cars.

The initiatives are reinforced with the first 114 power connectors and 47 different points in the country

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Where are the GAPS?

Strengths

- Active participation of different institutional actors on issues of sustainable mobility in cities (private, public and academic)
- Every day more specialized institutions and entities
- Increase in the use of sustainable mobility solutions
- Topographic conditions that favor the use of electric vehicles
- Regulation for electric
 mobility in cities

Weaknesses

- No long-term projection at the regional and national level
- Fear of risk from logistics operators
- No clear financing structures for the implementation of active mobility and for implementation of electric solutions
- Very small market for sustainable mobility solutions
- No applicability of development plans
- No coordination by local and national government entities

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Opportunities

- All local development plans point to the development of active mobility, electric mobility and sustainable urban logistics projects
- Intention of some of the logistics operators to implement more sustainable mobility solutions
- Pilot projects by private associations
- Better in the importance of sustainable mobility awareness of the citizens

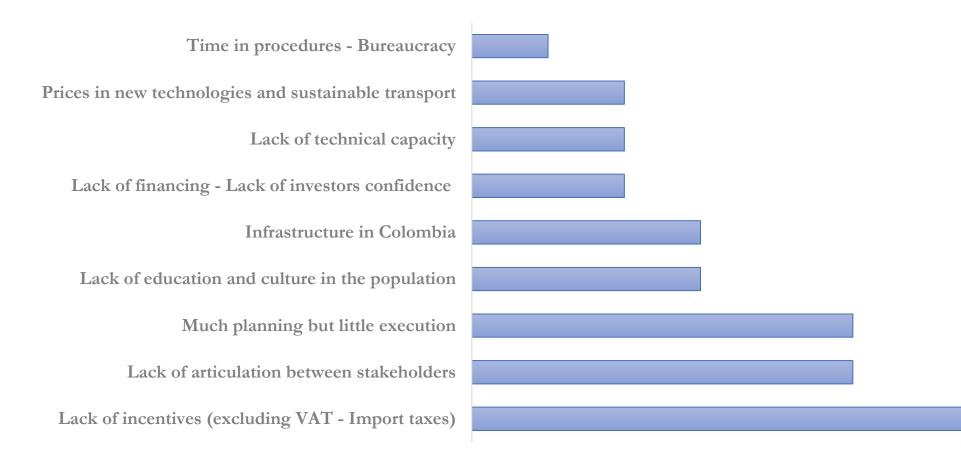
Threats

- Lack of knowledge of some other logistics operators and their preference for traditional transportation methods
- Non-continuation of development plans after the end of the regional mandate
- No understanding of the needs and benefits of more sustainable mobility methods by some citizens
- No regulations for the use of cargo bikes



Main challenges on urban mobility in Colombian cities

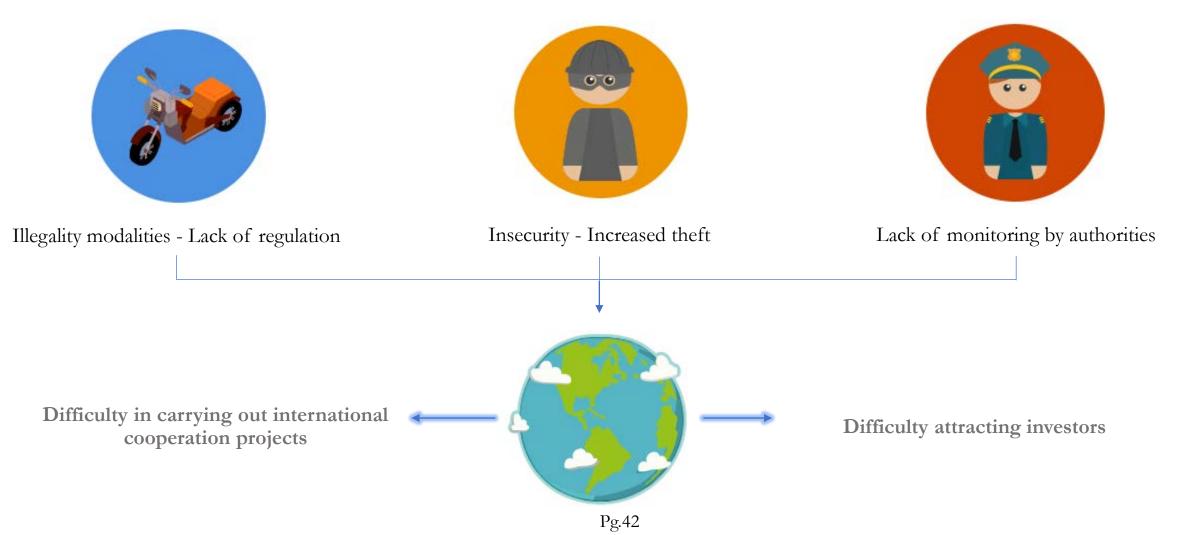
General Overview





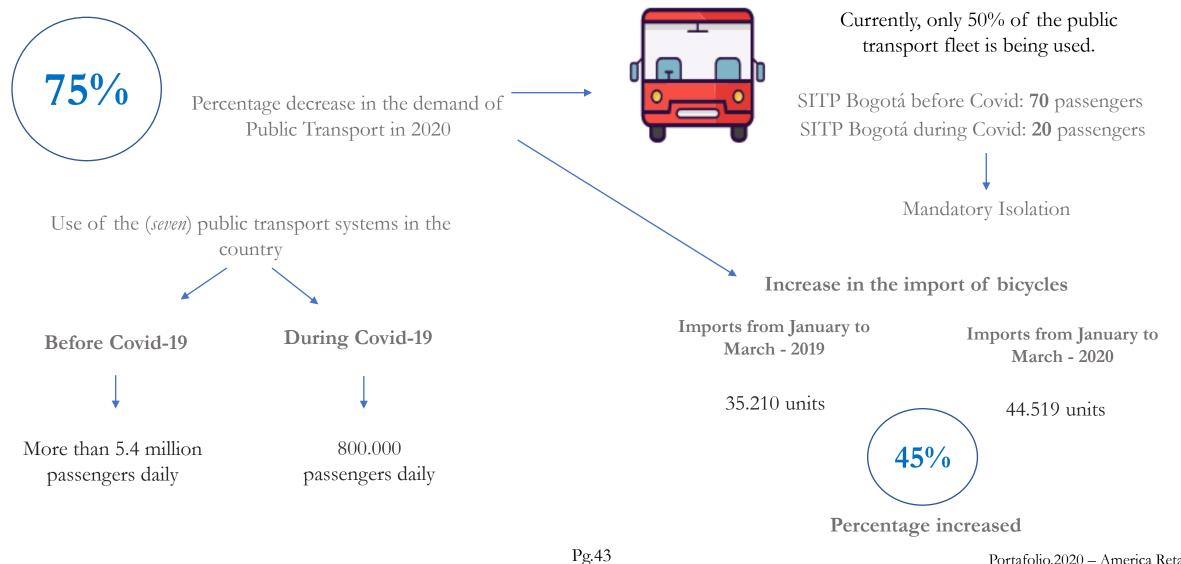
Main challenges on urban mobility in Colombian cities

Other aspects to consider





Impact of Covid – 19 on Urban Mobility

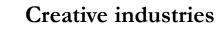




Strategy for Economic Reactivation in Colombia ---- Post-Pandemic

"Nuevo Compromiso Colombia"

- 1) Commitment to job creation.
- 2) Commitment to clean growth.
- 3) Commitment to the poorest and most vulnerable.
- 4) Commitment to the countryside, peace and legality.



COP 2,2 billions will be invested to stimulate and present a new normative law to reactivate the sector.

17 digital transformation projects will be executed, including digitizing State services



Chapter 3: Turning GAPS into

…

business opportunities





Government of the Netherlands





Dutch Colombian cooperation in mobility: what have we done together?

Trade mission on urban development from the Netherlands to Colombia in the framework of the FILBO International Book Fair in April 2016.

Participation of 2 Colombian mayors in the 'mission of sustainable cities of Latin American mayors' to the Netherlands in April 2017.



2

Participation in the Velocity event in June 2017 and 2018.

Dutch commission visit to Colombia, during the fair BICIGO in 2019.



a

Colombian commission participation in the International Cargo Bike Festival (ICBF) in 2019.



MOU between Chamber of Commerce of Bogotá and TOP SECTOR LOGISTICS in 2019.



Colombian-Dutch Dialogue - Knowledge transfer from Dutch experts to Colombia on Sustainable Urban Logistics in 2019.



Sustainable Mobility Mission in the Netherlands 2019 – With the participation of the Vice minister Juan Carlos Bustos.



Tenders/ Public Private Partnerships in Colombia





www1.upme.gov.co/Paginas/default.aspx



www.findeter.gov.co



https://minciencias.gov.co/



https://bogota.gov.co/



https://www.findeter.gov.co/pregu ntas-frecuentes/300005/ciudat/





www.mintransporte.gov.co



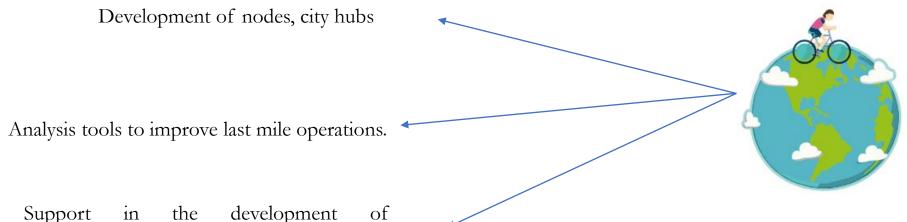
www.apccolombia.gov.co

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Opportunity 1: Infrastructure planning - create local capacity



infrastructure for sustainable vehicles.

Dutch Companies:



Oonnekt





Interesting Projects in Colombia – Things to do

NAMA TAnDem: Improves the quality of urban life in Colombian cities and contributes to mitigate climate change through an increasing use of the bicycle and the responsible use of private motorized modes. *<u>mmm.findeter.gov.co</u>*

Medellíncaminableypedaleable:trainingincycloinfrastructure program.https://www.medellin.gov.co/movilidad/

Global Innovation Fund: <u>https://bit.ly/3gXCH6s</u>



Opportunity 2: Training on clean technologies for entrepreneurs and youth

Clean Technologies

Data monitoring and analysis - for public policy decisions





Interesting public policy projects in Colombia - Things to do

Fleet Renewal in the Cities: New 5.800 vehicles

Cargo Vehicle Modernization Program (PMVC) implemented by the National Government expects to renew 47% of cargo vehicles with more than 20 years in 2025.

Vivo mi Calle: promoting physical activity in cities is through daily cycling and walking among adolescents from low-income neighborhoods. <u>https://bit.ly/2POgLOU</u>

BiciLab: educational program promoted with the mission of causing social change with the bicycle as a tool. <u>https://bit.ly/3iAHb32</u>



Opportunity 3: Transfer technology for bicycle assembly

Increase the production and assembly capacity of electric vehicles (especially bicycles) in Colombia.



Dutch Companies:



In 2019, Colombia imported 458.348 Bicycles – 150.000 were assembled

Interesting Projects in Colombia - Things to do

Participation in National Programs: Colombia cuida a Colombia. <u>https://colombiacuidacolombia.com/</u>

It aims to stimulate the national production of bicycles and promote the creation of new local assembly centers.

Partnerships: Support in providing knowledge in different processes to Colombian companies with the same purpose.

- Company Example: Parts importer https://www.propartes.com/

- Program Example: Sharing knowledge https://www.colombiaenbicicleta.com/cursomec.php

Initiatives that adapt to the Colombian market: prices and regulations.



Opportunity 4: Sustainable Logistics

Analysis of clean technologies for logistics

Development of nodes, loading and unloading areas.

Dutch Companies:





Interesting Projects in Colombia - Things to do

Partnerships: Support in providing knowledge in different processes to Colombian companies with the same purpose. Program Example: Sena Innova - <u>https://bit.ly/3h13kHE</u>

Participation in National Programs/tenders: "Banco de Retos". It seeks to promote the development of IT solutions and tools that can be applied to traditional productive sectors that require technology-based solutions. https://bit.by/2Y0UPEG

Initiatives that adapt to the Colombian market: prices and regulations.



Opportunity 5: Traffic Management

Software – Hardware

IT systems for traffic management and administration





Interesting Projects in Colombia – Things to do

Partnerships: Support in providing knowledge in different processes to Colombian companies with the same purpose such as:

- CPS: <u>https://bit.ly/3kKjIyv</u>
- Grupo Movilidad: <u>http://grupomovilidad.com.co/</u>
- Sitt: <u>https://www.sittycia.com/</u>
- VRC Ingeniería: <u>https://vrcingenieria.com/</u>

Partnerships: Alliances with the public sector for traffic management and strategic urban planning.



Opportunity 6: Change of urban plans

Covid-19

With the impact of Covid-19, new strategies are sought to promote sustainable modes of transport

Due to the decrease

in bicycle

production, there is

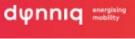
a lot of demand and

little supply.

Alternative, sustainable and personal modes of transport (avoiding crowds)

Dutch Companies:













Interesting Projects in Colombia – Things to do

Partnerships: Support in providing knowledge in different processes to Colombian companies with the same purpose.

Partnerships: Alliances with the public sector for traffic management and strategic urban planning.

Projects in Bogotá:

- North Bike Path: 1,060 square meters of signage on the road and direct connection to other bike paths.
- Bikeway "Ciclo Alameda del Medio Milenio": 25,6 km that will support 43,000 bikes per day \rightarrow Plan for 2023. (2 Dutch Companies part of the project)

Initiatives that adapt to the Colombian market: prices and regulations.

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TIPS – Doing Business in Colombia



Make a first contact with the Embassy of the Kingdom of the Netherlands: With their experience and contacts in the public and private sector, they can speed up processes.



Partnerships in Colombia: With the help of Holland House Colombia, you can structure an agenda that allows you to learn about ongoing and future projects. Also, to find your perfect partner in the country.



Culture:

- 1. Timing: Be patient at the moment of establishing alliances with a partner or participate in a tender.
- 2. Partnerships: Build lasting alliances (cordial and contractual) with the right partners.
- 3. Money: Make proposals taking into account labor costs in Colombia.

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Events: Participate in networking events or business conferences that can help promote your products / services in the country. To participate in events you can find support at the Embassy of the Kingdom of the Netherlands and Holland House Colombia.



Events, Congresses and Fairs (virtual and presential)

LATAM MOBILITY

Latin American Sustainable Mobility Congress, high-level conferences, transportation forums, in addition to sharing and generating networking opportunities with the main leaders of the sustainable mobility sector..

September. Medellín, Colombia.

www.latamobility.com



INTERNATIONAL MEETING OF ELECTRIC MOBILITY

Government of the Netherlands

To be confirmed.

www.energycolombia.org/eventos

→ TRAFIC LATINOAMÉRICA 2020

Safe and sustainable mobility fair, brings together various sectors focused on urban planning, mobility and city safety.

December. Medellín, Colombia.

http://traficlatinoamerica.com

Events, Congresses and Fairs (virtual and presential)





Bici – Go Colombia → March 11 to 14 / 2021 <u>https://bicigocolombia.com/</u>

BiciGO brings together a large number of bicycle lovers. Followers, fans, athletes and the general public participate in this event.

This space is designed to encourage caring for the environment, the use of sustainable transport in cities and sports, invites users to a great meeting of bicycles, accessories and accessories for the cycling industry in Colombia and Latin America.

Don't hesitate to ask for support!

Contact:

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