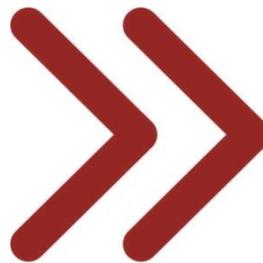


RENEWAL OF BUSES IN CUENCA CITY



GEOGRAPHIC LOCATION OF CUENCA

South America

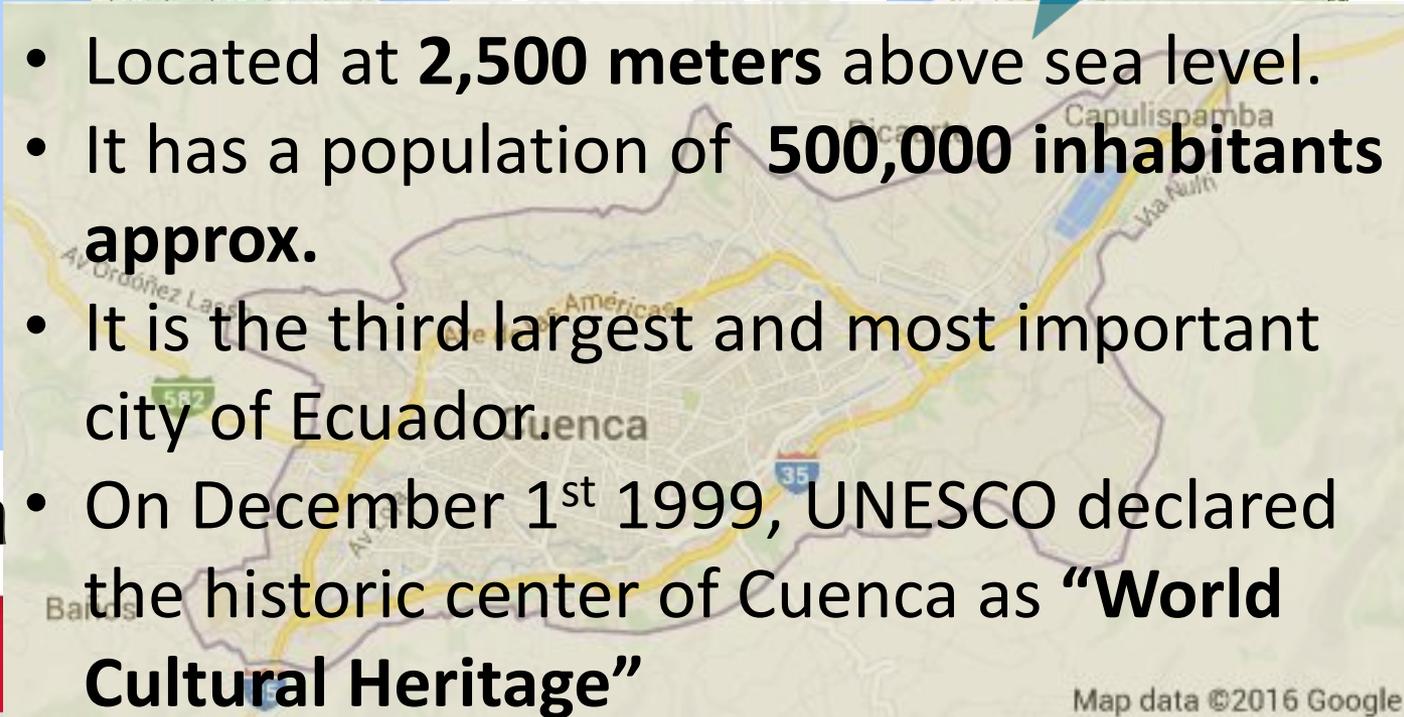


Ecuador



- Located at **2,500 meters** above sea level.
- It has a population of **500,000 inhabitants approx.**
- It is the third largest and most important city of Ecuador.
- On December 1st 1999, UNESCO declared the historic center of Cuenca as “**World Cultural Heritage**”

Cuenca





HISTORY OF URBAN PUBLIC TRANSPORT IN CUENCA



IMPORTANCE AND NECESSITY OF RENEWING THE PUBLIC TRANSPORT FLEET



Para mi hermano Antonio y mi cuñada María



Para mi hermana Sandra



Para mis padres



Para los titos Julián y Lorena



Para mi hermano Juan



Para el primo Julio



Para el tito Gabriel



Para mi hermana Marta

Estrategias de Lucha Contra el Cambio Climático:

Movilidad Sostenible

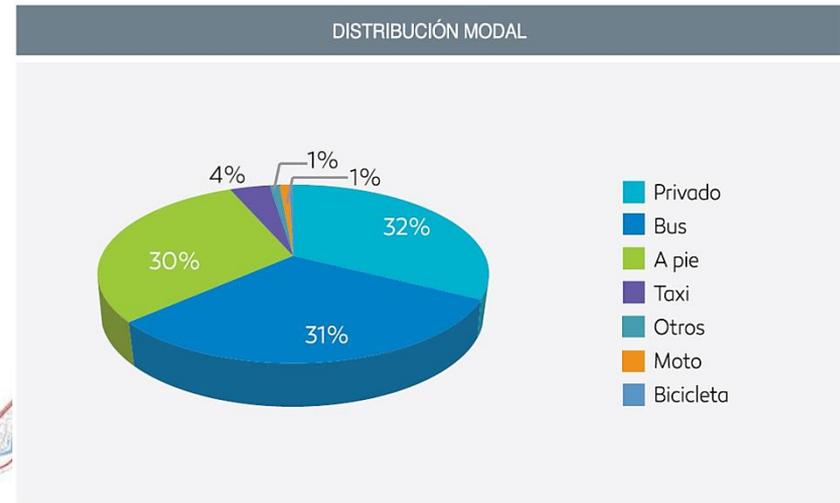
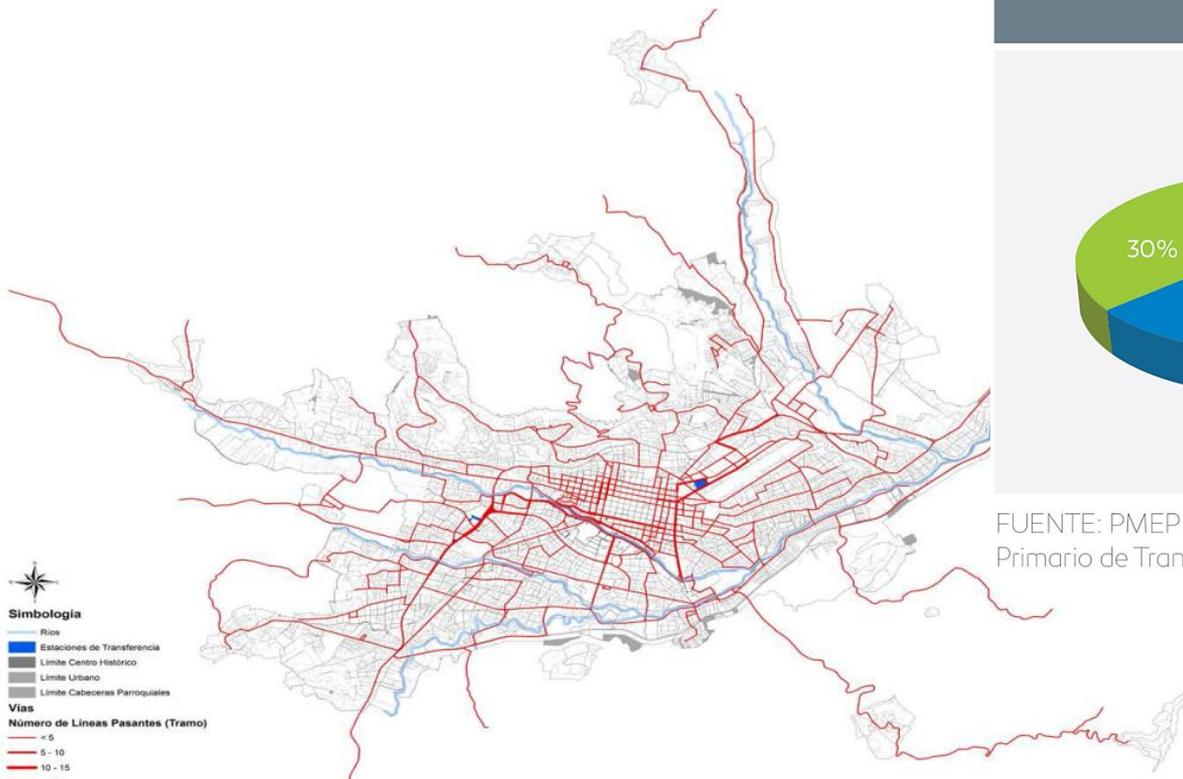
PUBLIC TRANSPORT BUSES

- Currently there are 7 public transport companies, which operate with 475 buses distributed in 29 lines through the city.
- 14% of those lines are operating with a model called Integrated Transport System (ITS).



PROJECT OBJECTIVES

1. RESTRUCTURING bus lines according new models of Transportation in the city.



FUENTE: PMEP en base a la Encuesta de Hogares del Estudio Red Primario de Transporte ETS, 2012.

Deadline: 2016 - 2018

PROJECT OBJECTIVES

2. Establish minimum SPECIFICATIONS AND FEATURES for the new buses.

ESPECIFICACIONES TÉCNICAS PARA RENOVACIÓN DE BUSES URBANOS DE CUENCA			
ESPECIFICACIONES		BUS TIPO I	BUS TIPO II
PARTE	DESCRIPCIÓN		
MOTOR	Ubicación	POSTERIOR o FRONTAL (Adelantado al eje)	POSTERIOR
	Tipo de Combustible	Diesel	Diesel
	Cumplimiento de emisiones (mínimo)	EURO III o EPA98	EURO III o EPA98
	Sistema de Inyección	Electrónica	Electrónica
	Limitador de velocidad	SI Programable	SI Programable
	Torque Mínimo	700 Nm	700 Nm
	Potencia Mínima	210 CV	210 CV
CHASIS	Suspensión	Mecánica, Neumática o Mixta	Neumática
	Transmisión	AUTOMÁTICA	AUTOMÁTICA
	Altura	PISO ALTO	PISO SEMIBAJO
CAPACIDAD DE PASAJEROS	Sentados	40	40
	Parados	50	50
	Total aproximado	90	90
CARROCERÍA	No de puertas	3	3
	Longitud Mínima	10 mts	11 mts
	Ancho	2,60 mts	2,60 mts
	Acceso - Personas con movilidad reducida	SI	SI con RAMPA



Deadline: 2016 - 2018

PROJECT OBJECTIVES

3. Calculate the OPERATING COSTS with the new public transport fleet.



Deadline: 2016 - 2018

PROJECT OBJECTIVES

4. Set a NEW INTEGRATED PASSENGER RATE with an electronic payment

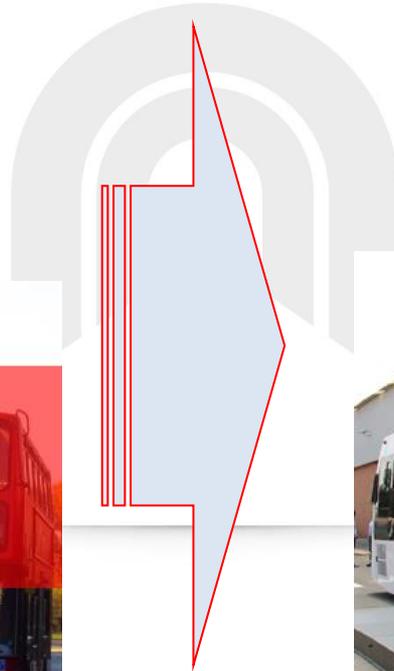


Deadline: 2016 - 2018

DIFFICULTIES IN THE RENEWAL PROCESS

1. **DIESEL FUEL QUALITY**, has a high sulfur content (> 5000 ppm).

EUR II



EUR III

PREMIUM DIESEL



DIFFICULTIES IN THE PROCESS OF RENEWAL

2. STEEP SLOPES on the roads on the outskirts of the city.

Do not allow incorporation of low-floor buses (low entry)



Limit routes with semi low floor buses.

DIFFICULTIES IN THE PROCESS OF RENEWAL

3. **HIGH COSTS** of acquisition of buses and post sale maintenance.



POSITIVE ASPECTS IN THE PROCESS OF RENEWAL

1. Availability of information gathered in the TRANSPORTATION PLAN projected 10 years.
2. Integration of transport operators through a joint consortium.
3. Willingness and openness to change the transport system of urban service operators.
4. local and national economic incentives to purchase new buses.
5. Commitment of the Municipality of Cuenca to drive a better urban transport service.

THANK YOU FOR YOUR ATTENTION



Ing. Pedro Cabrera M.

TECHNICIAN - Municipal Transportation Authority and Land Transportation

Magister in Education and Social Development

Administrator agreement for inclusion of electric vehicles (Cuenca Ecuador)

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