

TRANSMILENIO SYSTEM

(BUS RAPID TRANSIT SYSTEM IN BOGOTA – COLOMBIA)

Urban transportation for Mediterranean developing countries

Casablanca, 21st January 2008

TRANSMILENIO

1. BOGOTA – TRANSPORT INFORMATION
2. BOGOTA'S TRANSPORT DESIGN
3. URBAN DEVELOPMENT PLAN
4. RECENT CHANGES IN BOGOTA
5. DIFFICULTIES

TRANSMILENIO

1. BOGOTA – TRANSPORT INFORMATION
2. BOGOTA'S TRANSPORT DESIGN
3. URBAN DEVELOPMENT PLAN
4. RECENT CHANGES IN BOGOTA
5. DIFFICULTIES

BOGOTÁ D.C. - COLOMBIA



- Average temperature is 17° Celsius.
- Altitude: 2.600 meters over the sea level.
- Extension: 37.414 ha aprox.
- Current Population: 7'000.000 inhabitants, 15% of the country.
- Growth rate per year: 2.5%

BOGOTÁ



BOGOTÁ's TRANSPORT FACTS

Traditional Transport System

- 20.065 buses
- 4.112.214 journeys per day
- Rush Hour Speed 18 Km/hr
- 509 routes

Private Cars

- 1.000.000 vehicles
- 1.394.301 journeys per day
- Uses 80% of the network

Individual Public Transport

- 45.724 Yellow Cabs
- 350.130 Journeys per day



TRANSMILENIO

1. BOGOTA – TRANSPORT INFORMATION
2. BOGOTA'S TRANSPORT DESIGN
3. URBAN DEVELOPMENT PLAN
4. RECENT CHANGES IN BOGOTA
5. DIFFICULTIES

URBAN DESIGN – 1998 TRANSPORT FACTS

- Long routes for traditional public transport service, old buses and low load factor
- Average time per commute, 1.5 hours per direction
- 95% of the road network are for private transport, it represents 19% of the journeys (1'000.000 cars)
- 70% of the air pollution in the city is generated by vehicles



URBAN DESIGN – MOBILITY STRATEGY



1. PUBLIC SPACE RECUPERATION.
2. BICYCLE
3. DISCOURAGE PRIVATE CAR USE
4. MASS TRANSPORTATION

1. PUBLIC SPACE RECUPERATION

- 285.500 mt² constructed in walkways, green space, road dividers, sidewalks.
- 3.149 neighborhood parks
- 323 pocket parks
- 11 metropolitan parks



BEFORE



AFTER

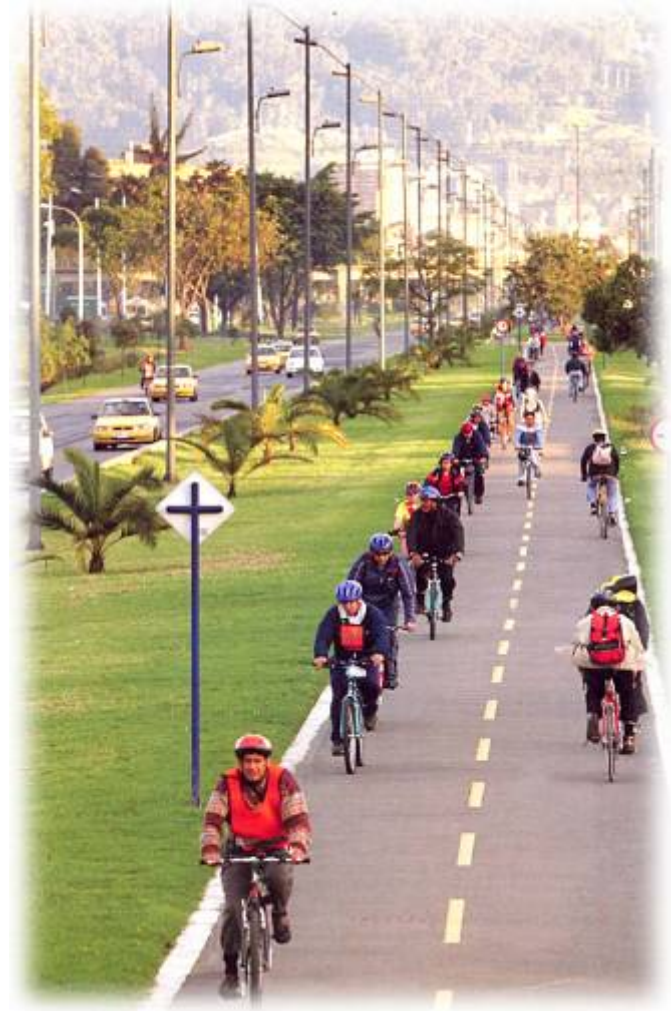


PLAZA SAN VICTORINO



2. BICYCLE

- Bikeway network
- 350 Km. of bikeways constructed.
- Bicycle utilization grows from 1% in 1995 to 4% today.
- 1.498 bike parks



Sistema CicloRuta de Bogotá D.C.

CicloRuta



¡Cambia tu Via!



Convenciones

RED DE CICLORUTAS

- | | |
|--|---|
| — Ejecutado | — En ejecución |
| ● Estaciones TransMilenio | Humedales |
| — Troncales TransMilenio | Parques |
| ⬡ Puntos de Encuentro | — Manzanas |
| — Río Bogotá | |

Bogotá in indiferencia

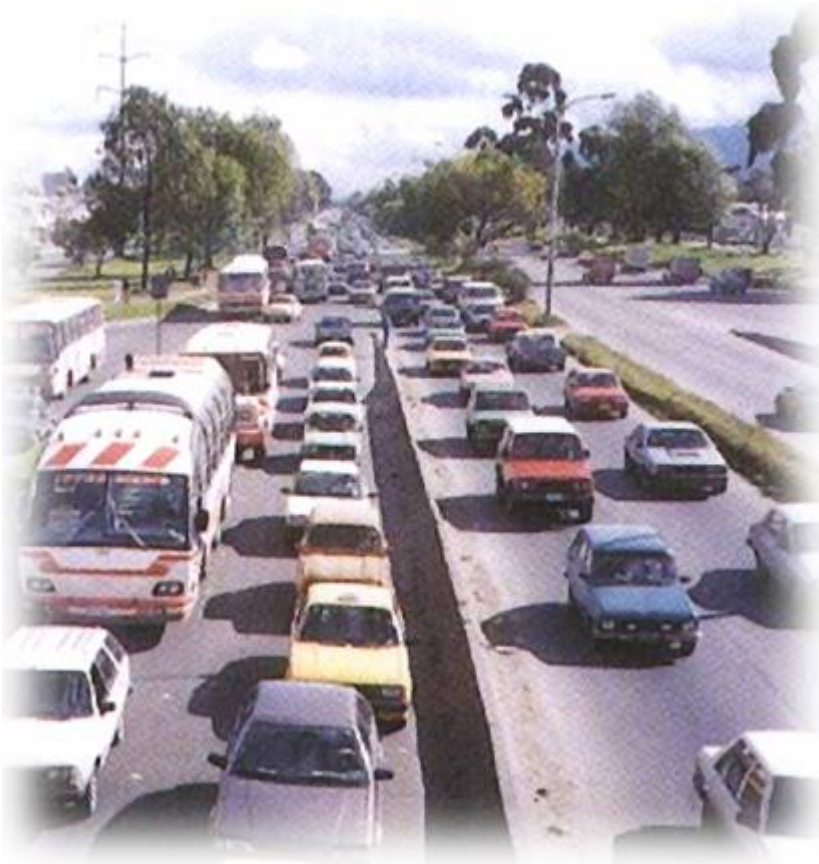


ALCALDIA MAYOR
DE BOGOTÁ D.C.



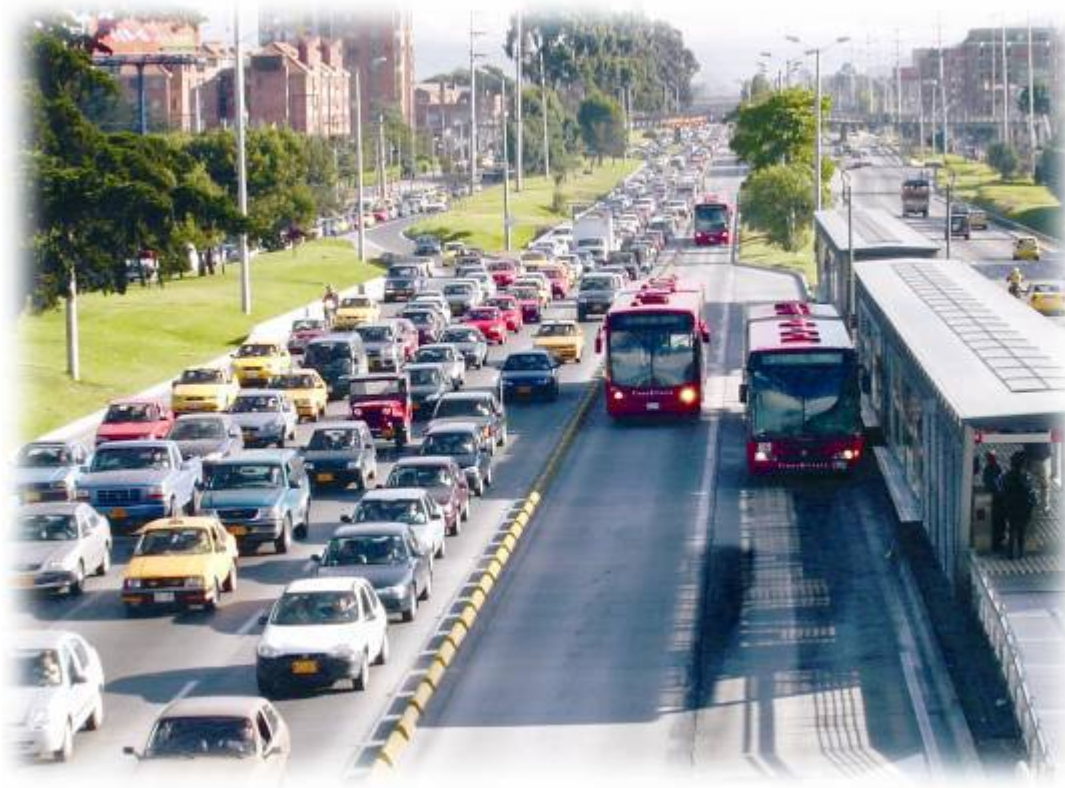
BIKE-PARKINGS

3. DISCOURAGE PRIVATE CAR USE



- Restriction during peak hours (6-9 AM, 4-7 PM) using plate numbers for 40% of the private automobiles.
- 20% gasoline surcharge (revenue applied to transit infrastructure and road maintenance)
- Car free weekday on February (approved by popular vote)

4. MASS TRANSPORT SYSTEM



- 18.000 direct jobs during the construction.
- More than 6.000 direct jobs in operation.
- Just 280 jobs are from the government.

4. MASS TRANSPORT SYSTEM



TRANSMILENIO S.A.

ALCALDIA MAYOR DE BOGOTA

Planning, Management & Control

Accionista	% Part
Alcaldía Mayor de Bogotá	70.05%
FONDATT	19.97%
Instituto de Desarrollo Urbano	9.96%
Instituto Distrital de Cultura y Turismo	0.01%
Metrovivienda	0.01%
Total Capital social	100.00%



- Si99
- Expres de Futuro
- Ciudad Movil
- Metrobus
- Transmasivo
- Si02
- Connexion Movil



- Alnorte
- Sidauto
- Uribe y Uribe
- Alcón
- Codatermil
- ETMA



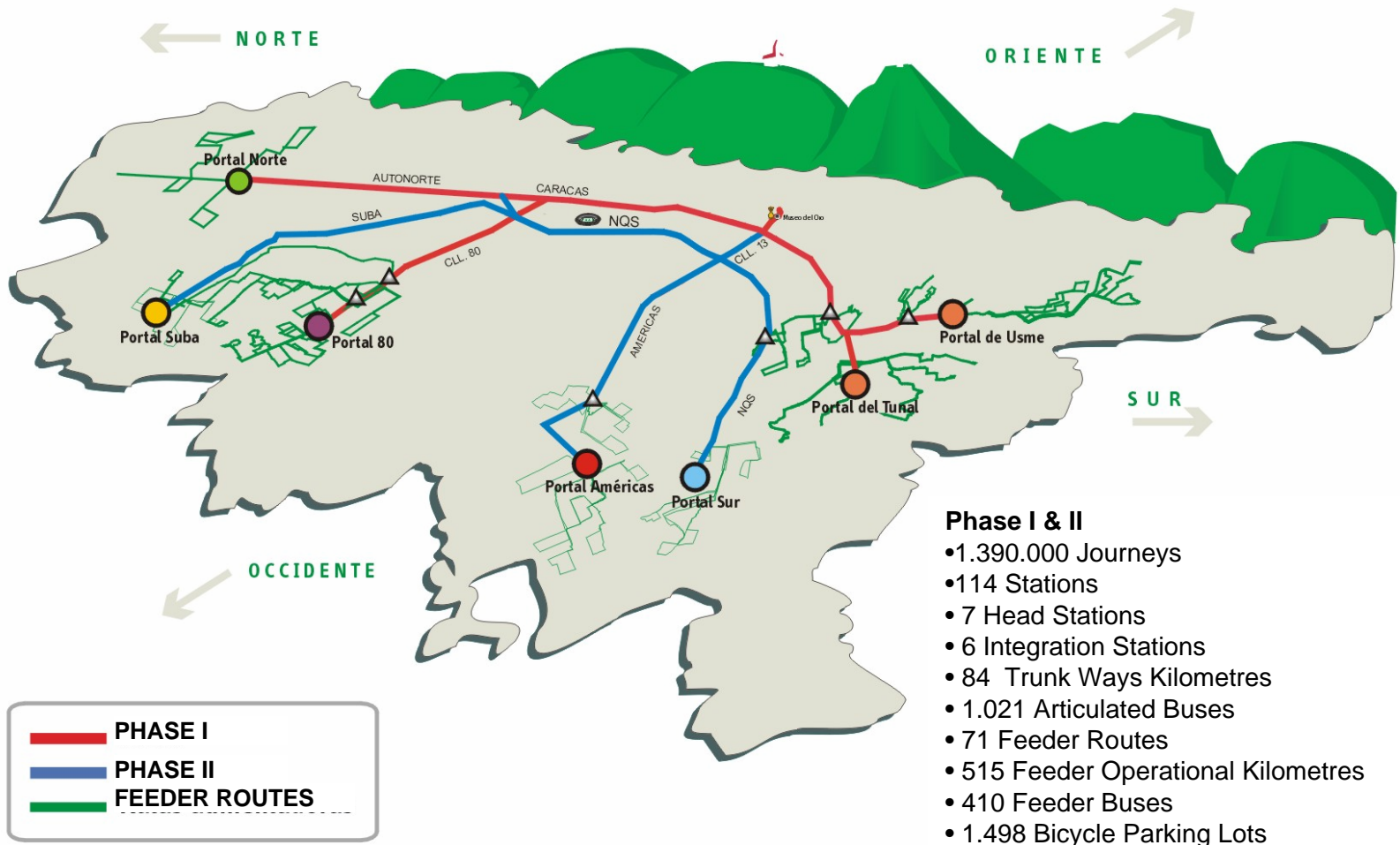
- Angelcom
- Unión Temporal Fase 2

4. MASS TRANSPORT SYSTEM

TRANSMILENIO SYSTEM

- Trunk ways on the left side of the road and segregated from private transport
- Trunk way stations every 700 meters
- Articulated buses capacity: 160 passengers
- 7 passengers per square meter on articulated buses
- Feeder buses share neighborhood streets with private cars, taxis, other public transport, etc.
- Feeder bus stops every 400 meters
- Feeder buses capacity: 90 passengers
- Stations on trunk corridors, allows entrance to everyone (same level without steps)
- Pedestrian overpasses with ramps

TRANSMILENIO SYSTEM - STATISTICS



BEFORE



AFTER





TRANSMILENIO

1. BOGOTA – TRANSPORT INFORMATION
2. BOGOTA'S TRANSPORT DESIGN
3. URBAN DEVELOPMENT PLAN
4. RECENT CHANGES IN BOGOTA
5. DIFFICULTIES

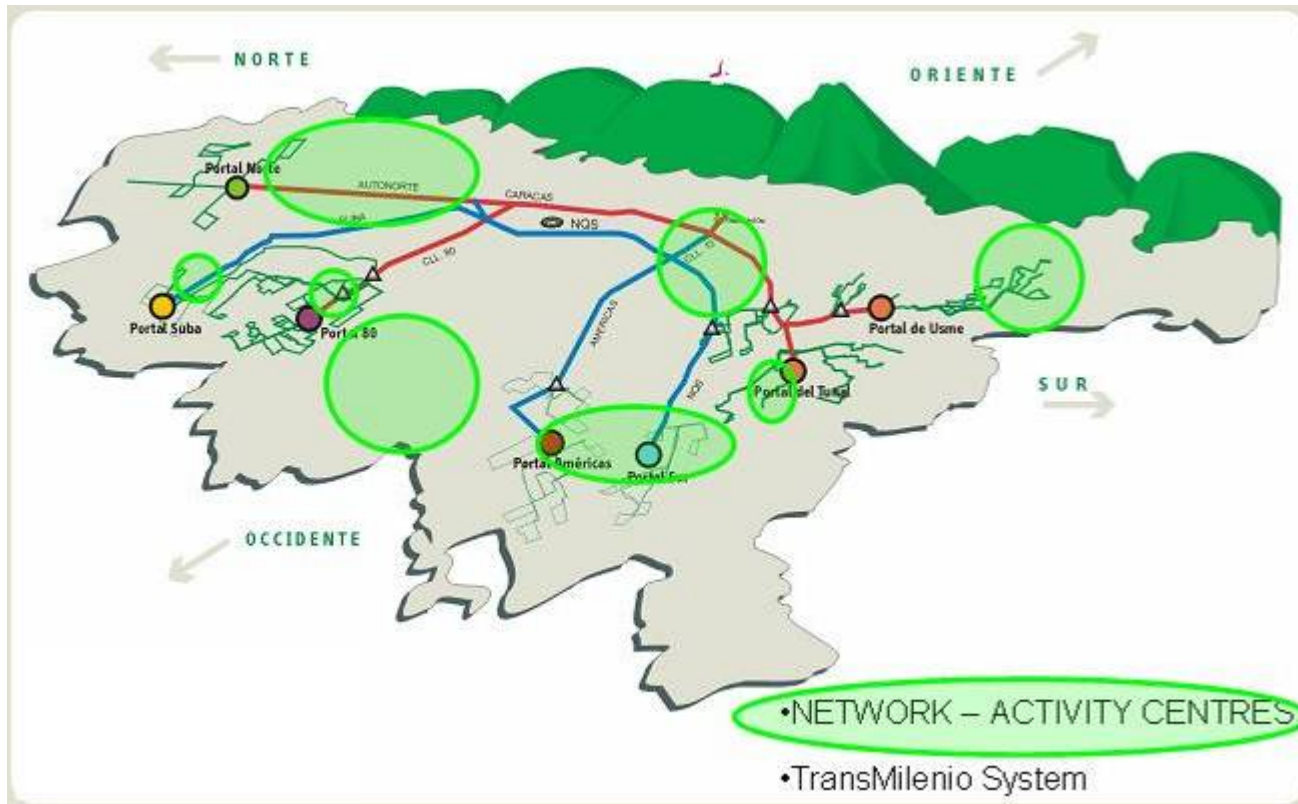
URBAN DEVELOPMENT PLAN

The Urban Development plan was created in year 2000. It is the guideline of the city, and contains the general rules to use the land. Also, project the urban expansion of the city between year 2001 to 2010.

The Plan establishes different systems to built the urban infrastructure such as:

- Road System
- **Transport System**
- City Equipment System
- Public Space System
- Housing System
- Water Service System
- Etc.

URBAN DEVELOPMENT PLAN – MOBILITY SYSTEM



The Urban Development plan focus its efforts on specific zones of the city that have a high economic activity, potential to develop housing projects and offer more public services.

The city is divided in Activity Centres in order to organize the **mobility system** and integrate urban projects.

URBAN DEVELOPMENT PLAN – MOBILITY SYSTEM

Components of the Mobility System:



Roads



Transport



Control



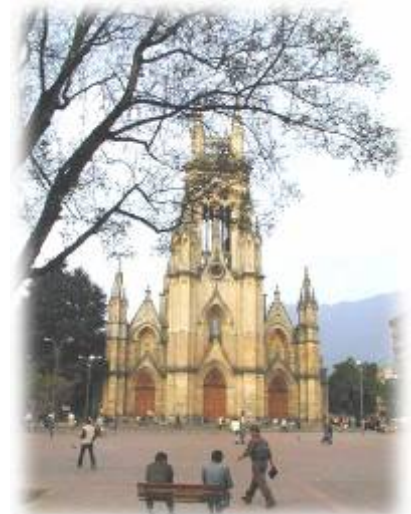
Sidewalks &
Pedestrian Space



URBAN DEVELOPMENT PLAN – MOBILITY RESULTS

Once the Plan has been structured, public companies join efforts in order to develop the city.

Bogotá D.C. today:



MOBILITY MASTER PLAN

- Signed & Published by the city major on august 15th / 2006
- Complement of the Urban Development Plan in terms of Mobility.
- It is the fundamental document to organize the city in the mobility aspects.
- Project the sector resources and investment that are going to be use in the short, medium and long term, according to the development and growth.

TRANSMILENIO

1. BOGOTA – TRANSPORT INFORMATION
2. BOGOTA'S TRANSPORT DESIGN
3. URBAN DEVELOPMENT PLAN
4. RECENT CHANGES IN BOGOTA
5. DIFFICULTIES

CENTS WAR END



Fare is collected by the bus driver



Smart cards

RENOVATION AND RECUPERACION OF THE PUBLIC SPACE



TRAVEL TIME REDUCCION



TransMilenio System reduces the
Travel Time by 23 minutes

TRANSMILENIO CULTURE ACCIDENTS REDUCTION



ACCESSIBILITY FOR EVERYONE



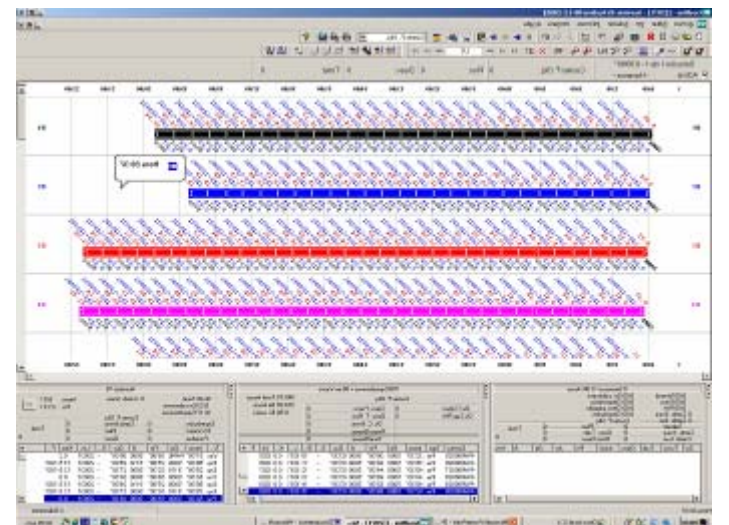
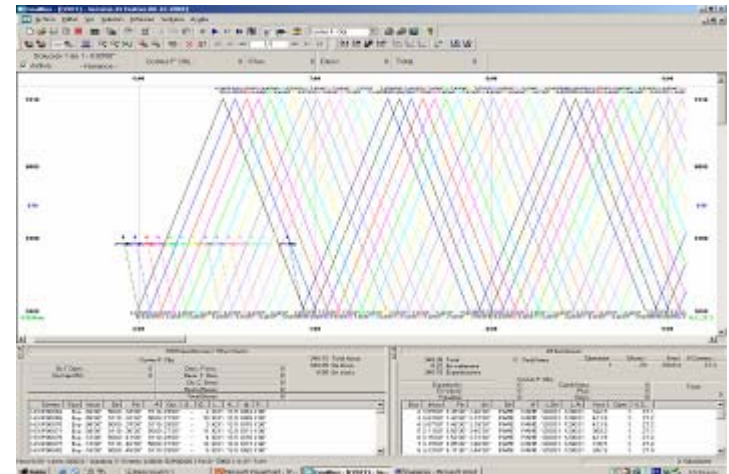
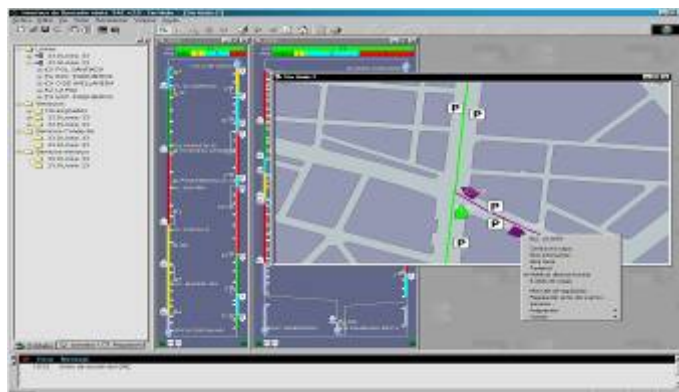
PERMANENT MAINTENANCE SPECIALIZED MAINTENANCE YARDS



PROGRAMMING AND CONTROL SOFTWARE

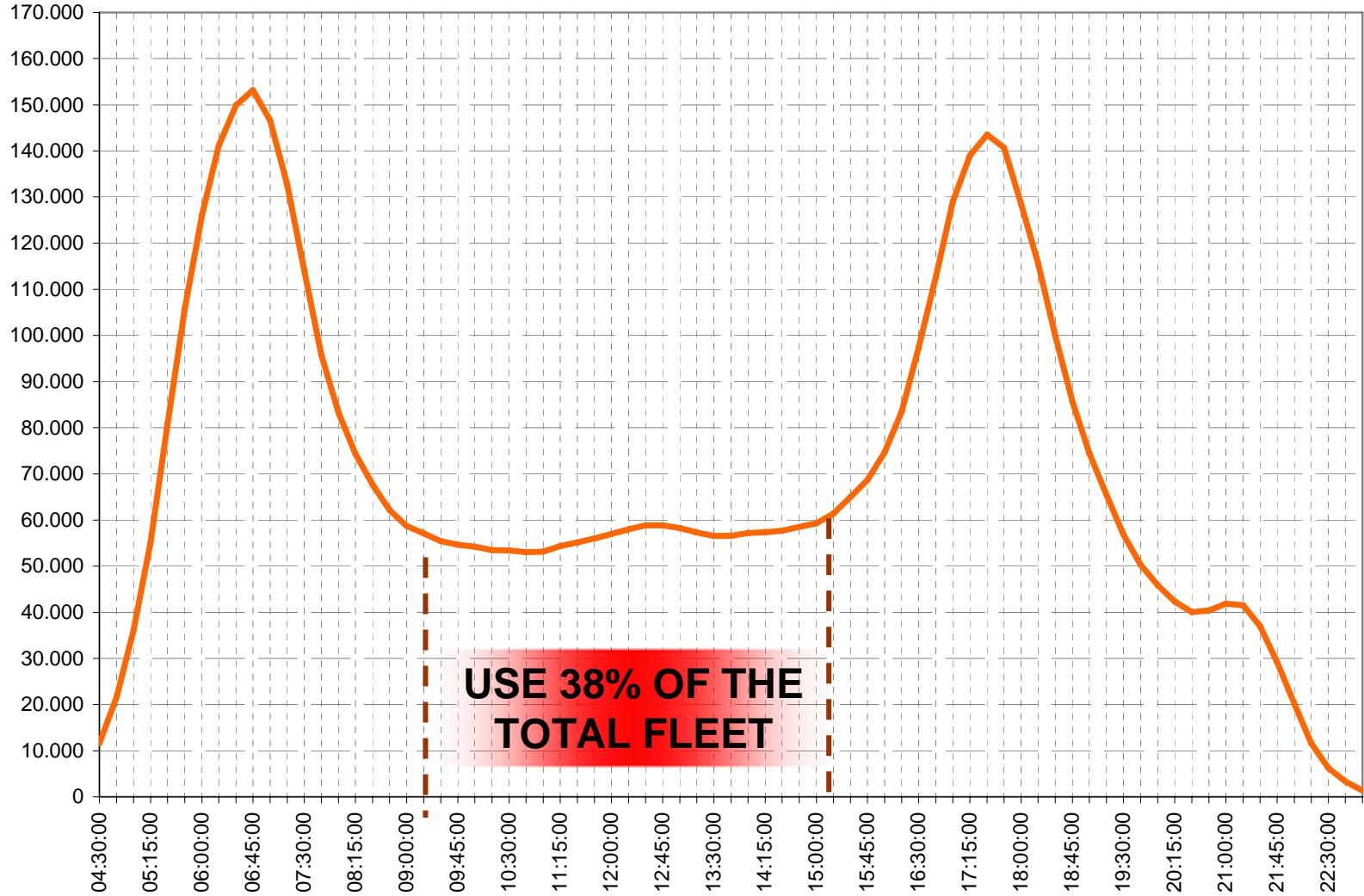


TransMilenio's Control Center



EFFICIENT USE OF THE FLEET

PASSENGERS PER HOUR



TRANSMILENIO

1. BOGOTA – TRANSPORT INFORMATION
2. BOGOTA'S TRANSPORT DESIGN
3. URBAN DEVELOPMENT PLAN
4. RECENT CHANGES IN BOGOTA
5. DIFFICULTIES

DIFFICULTIES

- Over capacity on the buses
- Bad service on ticket sales
- Full capacity on stations



THANK YOU

ANGELICA CASTRO RODRIGUEZ

angelcastro65@yahoo.com