

# **New Kids on the Latin American Block: Line 4 Metrobús, México City Transoeste, Rio de Janeiro Fase III TransMilenio, Bogotá**

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# 142 cities with BRT/ Bus Corridors/ BHLS 3,740 km, 23,486 passengers per day

Regions	Passengers / day	Number of cities	Length (km)
Latin America	15,050,098 (64.1%)	48 (33.8%)	1,278 (34.2%)
Northern America	677,986 (2.9%)	18 (12.7%)	534 (14.3%)
Asia	6,255,872 (26.6%)	24 (16.9%)	888 (23.7%)
Europe	936,970 (4.0%)	42 (29.6%)	632 (16.9%)
Africa	238,000 (1.0%)	3 (2.1%)	62 (1.7%)
Oceania	327,074 (1.4%)	7 (4.9%)	347 (9.3%)

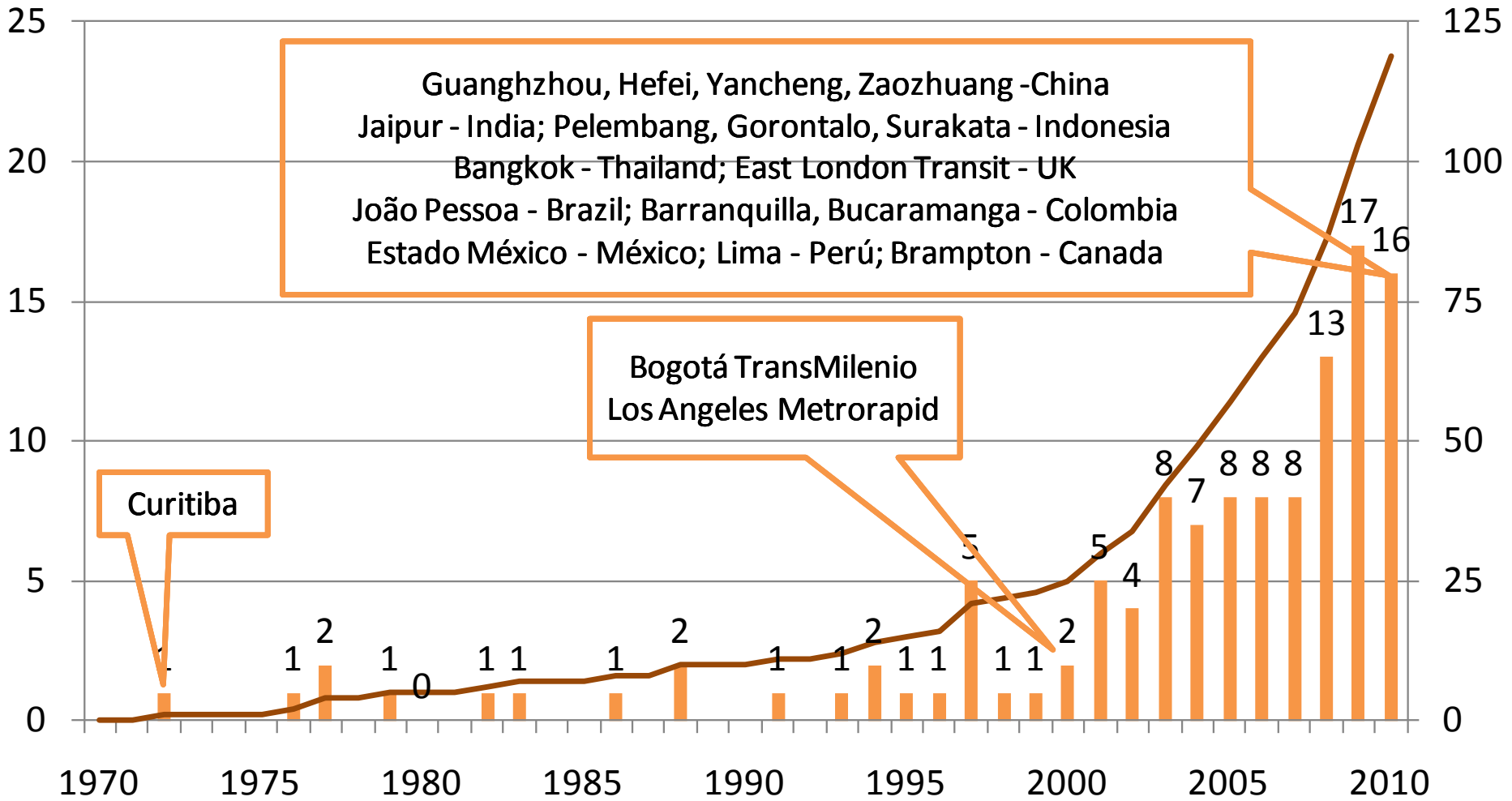
<http://brtdata.org/>



[www.sibrtonline.org](http://www.sibrtonline.org)

[www.brt.cl](http://www.brt.cl)

# Cities with BRT/Bus Corridors



# The new kids:



México City

Rio de Janeiro

Bogotá



**México City  
Metrobús**  
6 years, 95 km  
614,000 pax/day

**+95 km 2013-2018**

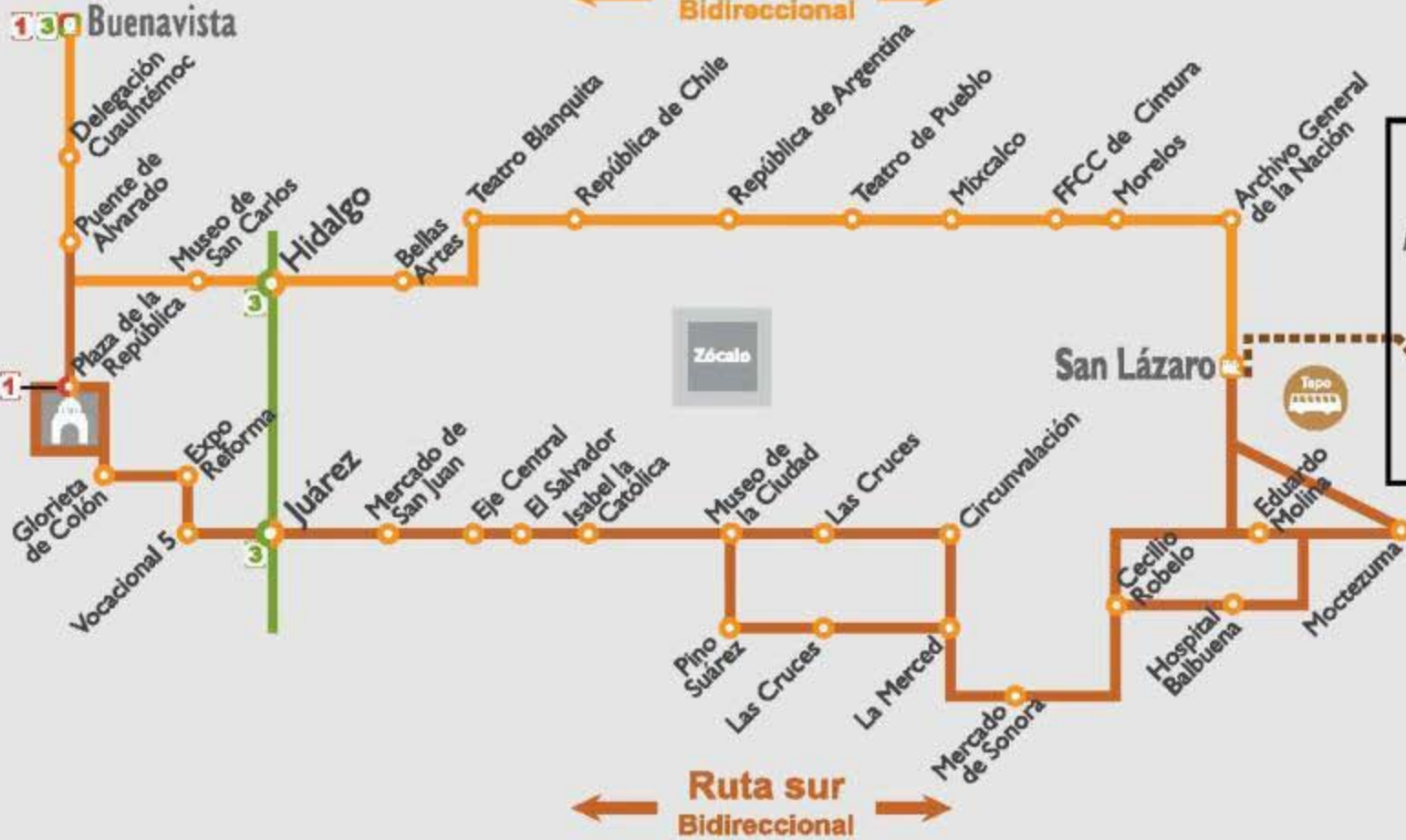
<http://www.metrobus.df.gob.mx/mapa.html>



# Línea 4. Mapa Esquemático

Ruta norte  
Bidireccional

Ruta sur  
Bidireccional



Conexiones de Metrobús. Selecciona una ícono para ubicar en el mapa >>



# Metrobús Line 4

- April 2012
- 28 km (2 roads bidirectional)
- 32 stops
- 2 terminals
- 2 airport stops
- 54 Euro V 12m buses (8 hybrid diesel-electric)
- Integrated electronic fare collection (on board)

Photo: CTS EMBARQ Mexico





Photo: CTS EMBARQ Mexico



ASCENSO DE PASAJEROS



ASCENSO DIRECCIÓN SAN LAZARO AEROPUERTO T1 Y T2



NO CRUZAR SALIDA AMARILLA



PERMITIR SALIRANTES SE ENTRAIR



SANTIANO



SANTIANO ENCARNAJONES



SALIDA



Buenavista



MODULO DE ATENCION



SALIDA LADO DIRECTO



Buenavista

Photo: CTS EMBARQ Mexico



Photo: CTS EMBARQ Mexico



ESTACIONAMIENTO  
TECHADO

E2 RUTA SUR BU  
553

Centro Histórico  
Desarrollan  
ME

Línea 4



Plaza de la República



Ruta Sur  
Por República de El Salvador

Mapa de barrio



Photo: CTS EMBARQ Mexico



Línea 4



Bellas Artes



Ruta Norte  
Por República de Venezuela

- Buenavista
- Delegación Cuauhtémoc
- Puente de Alvarado
- Museo de San Carlos
- Hidalgo
- Bellas Artes**
- Teatro Blanquita
- República de Chile
- República de Argentina
- Teatro del Pueblo
- Mixcalco
- Ferrocarril de Cintura
- Morelos
- Archivo de la Nación



Photo: CTS EMBARQ Mexico



Photo: CTS EMBARQ Mexico



Photo: CTS EMBARQ Mexico





Photo: CTS EMBARQ Mexico



Photo: CTS EMBARQ Mexico

## Things done well

- Adaptive design to historic district conditions
- Advanced vehicles
- New connections - mass transit corridors (BRT, Metro) and the airport

## Required improvements

- User information
- Speed
- Reliability
- Pedestrian safety

# Rio de Janeiro

## 150 km planned 2012-2016





Photo: EMBARQ Brasil

# Transoeste Ligeirão

## Currently in operation

- May 2012
- 40 km of which 32 km segregated median busways
- 29 stations, 2 terminals
- 65 articulated buses
- 55,000 pax/day
- R\$ 2,75 (USD 1,36) per trip

## Project

- 56 km of which 48 km segregated median busways
- 55 stations, 3 terminals
- 91 articulated buses
- 110,000 pax/day by the end of 2012
- 220.000 pax/day when connected to Metro in 2016
- 31 feeder routes, 147 feeder buses
- Capital investment R\$ 1,6 bilion (USD 800 million)



STA. CRUZ/C. GRANDE



STA. CRUZ

ESTRADA DE FERROVIÁRIAS DE TIJUBÁ

Photo: EMBARQ Brasil



Photo: EMBARQ Brasil





Photo: EMBARQ Brasil



Photo: EMBARQ Brasil



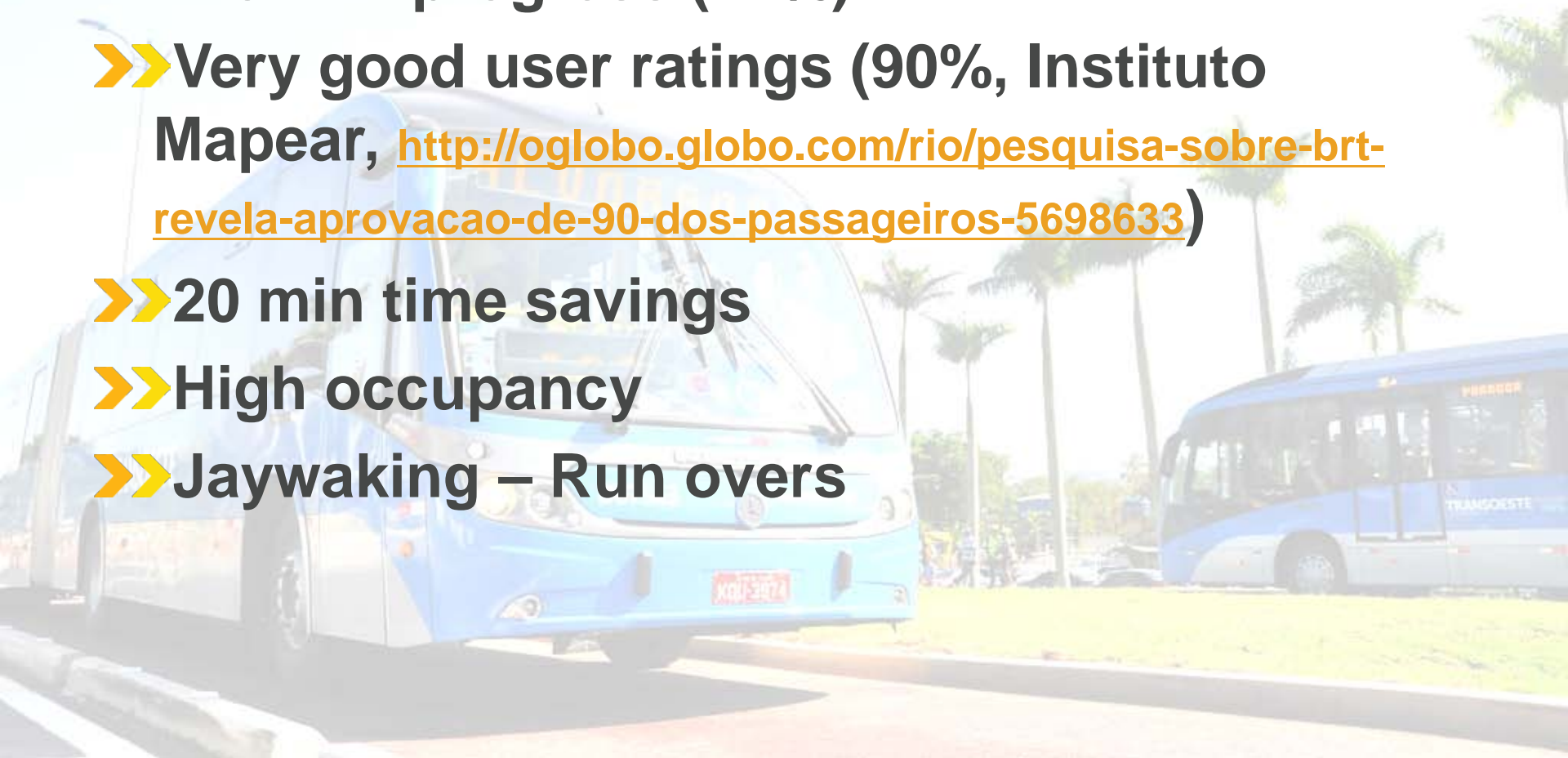
Photo: EMBARQ Brasil



Photo: EMBARQ Brasil

# Transoeste Ligerão

- Work in progress (71%)
- Very good user ratings (90%, Instituto Mapear, <http://oglobo.globo.com/rio/pesquisa-sobre-brt-revela-aprovacao-de-90-dos-passageiros-5698633>)
- 20 min time savings
- High occupancy
- Jaywaking – Run overs



# TransMilenio, Bogotá

104 km, 2 million pax/day (Dec 2012)



# Fase III TransMilenio, Bogotá

20 km, 520,000 pax/day (Dec 2012)



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# Fase III TransMilenio, Bogotá

## 20 km, 520,000 pax/day (Dec 2012)

### Eldorado Trunkway

- 12.2 km
- 1 Terminal Station
- 1 Integration Station
- 12 intermediate Stations
- 1 depot
- Pedestrian overpass access, 1 pedestrian tunnels

### Carrera 10<sup>a</sup> Trunkway

- 7.7 km
- 1 Terminal Station
- 2 Integration Stations
- 8 Intermediate Stations
- 1 depot
- 2 pedestrian tunnels
- At grade pedestrian access





<http://interpolitico.com/inicio/wp-content/uploads/2012/05/transmilenio12-571x350.jpg>



[http://www.caracol.com.co/images/1706569\\_n\\_vir1.jpg?u=150637](http://www.caracol.com.co/images/1706569_n_vir1.jpg?u=150637)



<http://www.eltiempo.com/colombia/bogota/IMAGEN/IMAGEN-12046587-2.png>



[http://www.caracol.com.co/images/1654864\\_n\\_vir1.jpg?u=151257](http://www.caracol.com.co/images/1654864_n_vir1.jpg?u=151257)



<http://www.metroenbogota.com/wp-content/uploads/2012/08/transmilenio-hasta-el-aeropuerto-el-doraro.jpg>

## Portal Eldorado Troncal Calle 26 Terminal



[http://www.elespectador.com/files/img\\_ipad/fcd890eff2aed371be7a0ec1cee68d5a.jpg](http://www.elespectador.com/files/img_ipad/fcd890eff2aed371be7a0ec1cee68d5a.jpg)

## **Troncal Calle 26 - Station**



## Central Station Urban Renewal Project (under construction)

<http://www.eru.gov.co/contenido/articulo/247-estacion-central>





## Portal del 20 de Julio Terminal Station

<http://www.elspectador.com/files/images/201105/7604fe3c744b9c4347f087bdc4a04dd6.jpg>



<http://www.eltiempo.com/colombia/bogota/IMAGEN/IMAGEN-8939936-2.jpg>



Instituto de Desarrollo Urbano

**Troncal Carrera 10a  
Calle 6 Intersection and Intermediate Terminal  
(under construction)**

# Fase III TransMilenio, Bogotá

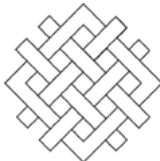
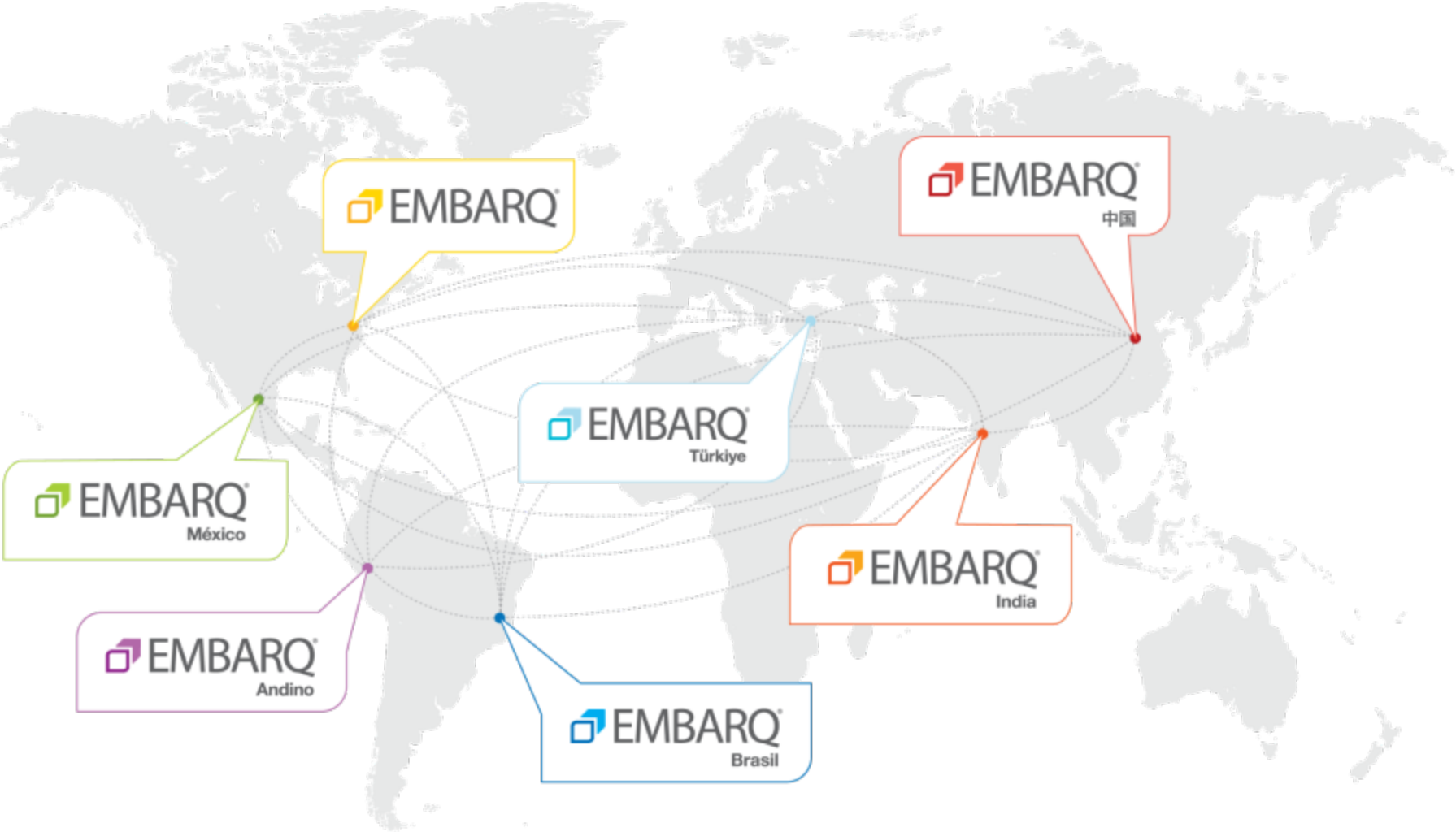
- Work in progress (30%, expected completion by Dec 2012)
- A component of the integrated mass transit system (SITP)
- Belated, 6 years
- High occupancy in Phases I and II
- 43 km BRT expansion planned 2013-2015 (+Metro + Light Rail Transit + Cables)

# The new kids in LAC:

- ▶▶ Examples of the leadership of latin american countries in BRT applications
- ▶▶ High capacity, low cost, rapid implementation
- ▶▶ Part of large scale integrated systems
- ▶▶ Adapting new technologies (vehicles and ITS)
- ▶▶ Some issues outstanding: reliability, occupancy



[www.embarq.org](http://www.embarq.org)



WORLD  
RESOURCES  
INSTITUTE



<http://www.embarq.org/en/node/4923>

**Versions in**  
**English**  
**Spanish**  
**Portuguese**

**Get involved!**

## **Traffic Safety on Bus Corridors**

Guidelines for integrating pedestrian and traffic safety into the planning, design, and operation of BRT, Busways and bus lanes

### **Pilot Version - Road Test**

Nicolae Duduta, Claudia Adiazola, Carsten Wass, Dario Hidalgo, Luis Antonio Lindau



**Information and Content Thanks To**

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