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Sustainable Transport and Urban Development Save Lives

Claudia Adriazola
Director, Health and Road Safety Program

Organization of American States
May 3rd 2011- Washington, DC

Agenda

- Background
- Rationale : Sustainable Urban Transport Save Lives
- BRT made in LAC
- Decade of Action for Road Safety 2011-2020

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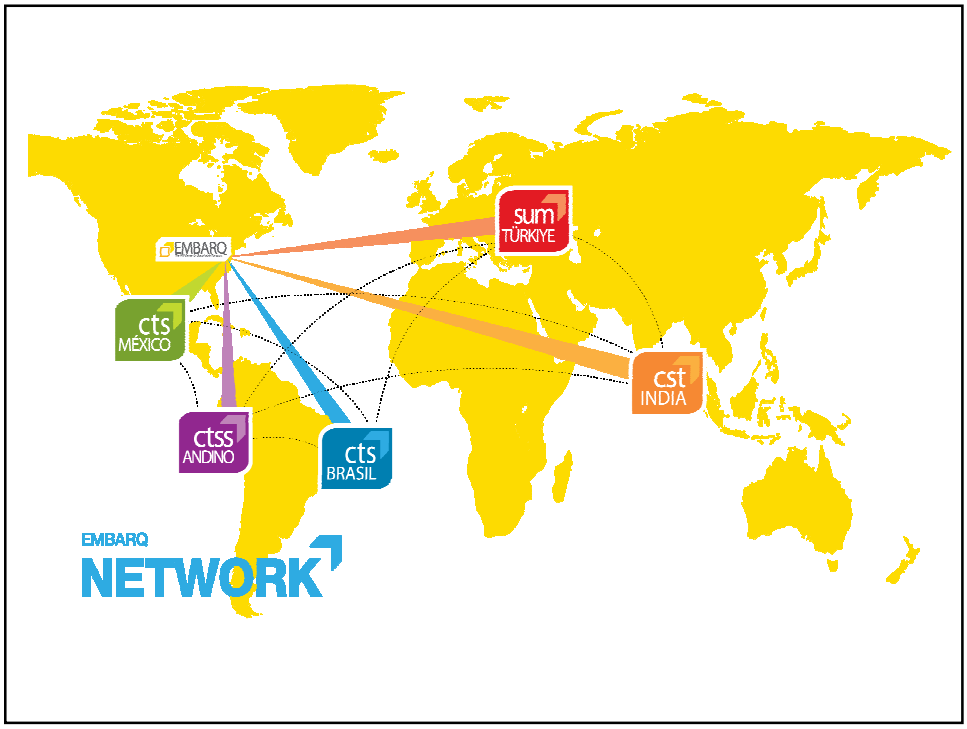
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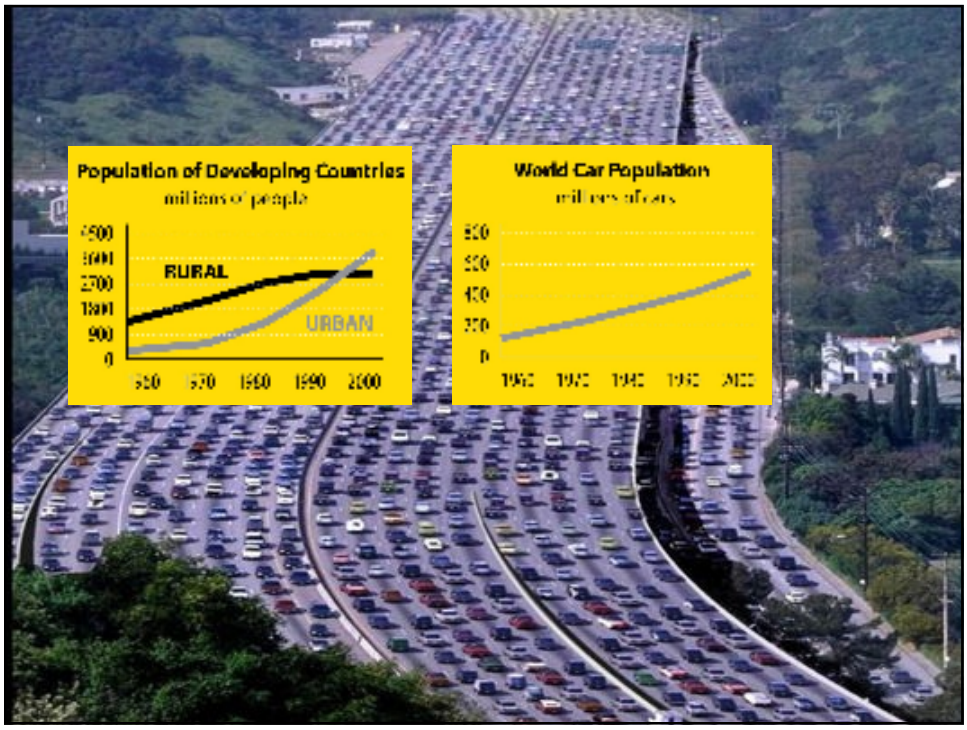
EMBARQ
NETWORK


Population of Developing Countries
RURAL
URBAN
World Car Population

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Disfuncional Relationship

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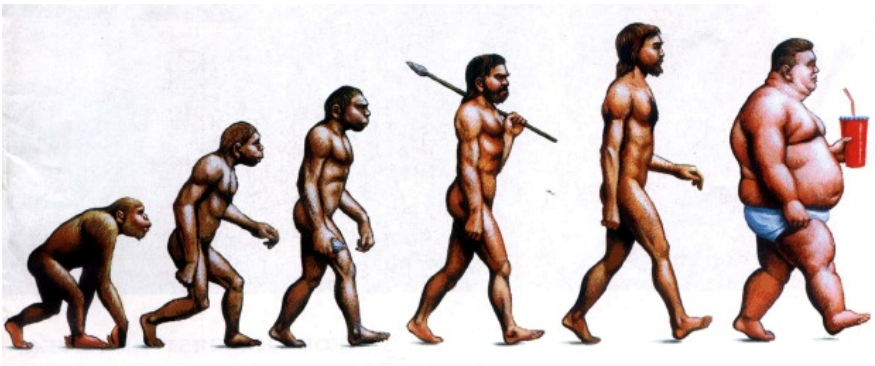
1.3 million people
Source: WHO

2 million people
Fuente: WHO

3.2 million people



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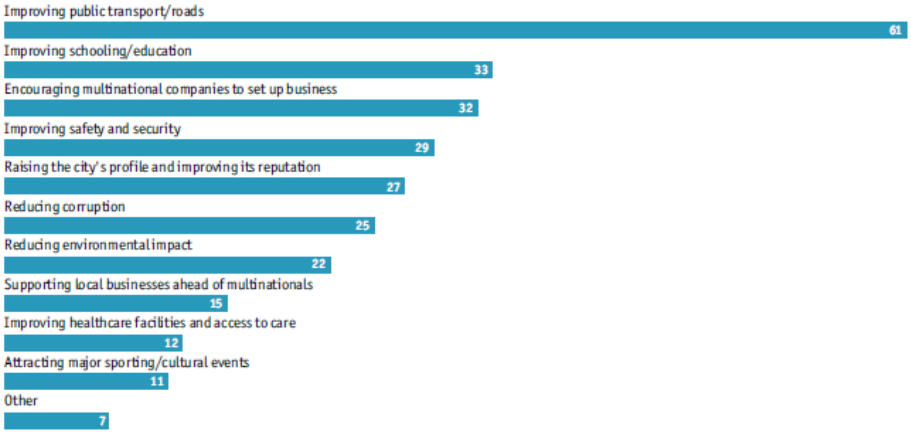
Source: WHO

What do you think should be the main priorities for your city's mayor/leadership in order to make your city more competitive for business? Select up to three.
(% respondents)



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Cómo? …..ASI…

avoid - evita

shift - desplaza

improve - mejora

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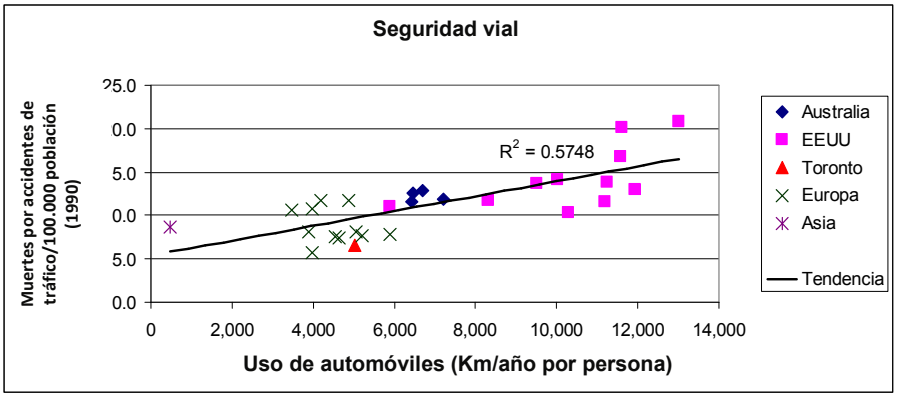
Las ciudades dependientes del automóvil tienen más accidentes

Ciudades en EE.UU tienen 66% más muertes en accidentes de tráfico por persona que ciudades equivalentes en Europa y Asia y 123% más que Toronto



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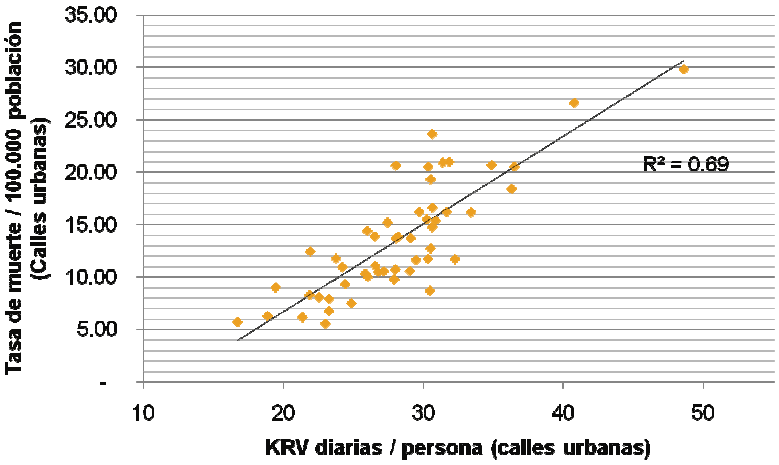
Fuente: INDICATORS OF TRANSPORT EFFICIENCY IN 37 GLOBAL CITIES, Jeff Kenworthy, Felix Laube, Peter Newman and Paul Barter, World Bank, 1997

Esta correlación se confirma con los datos de los Estados de los EE.UU.



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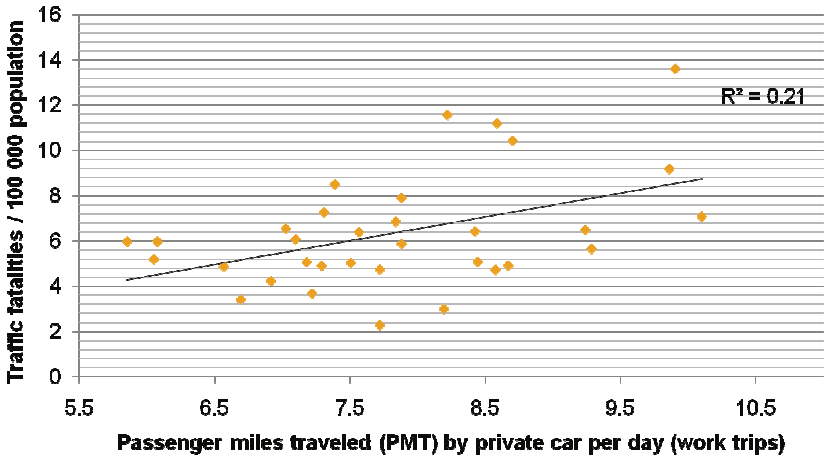
Fuente: FHWA Highway Statistics, 2008
Regression Analysis: EMBARQ

También es evidente en ciudades Alemanas



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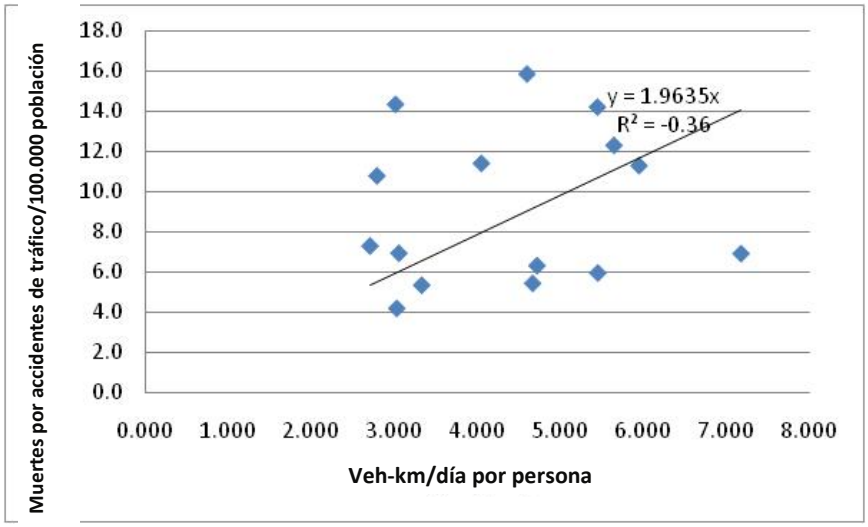
Source: Eurostat, 2003-2006
Regression Analysis: EMBARQ

Sucede lo mismo en América Latina



Fuente: Observatorio de Movilidad Urbana para América Latina, Corporación Andina de Fomento, 2010

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Cómo? …..ASI…

avoid - evita

shift - desplaza

improve - mejora

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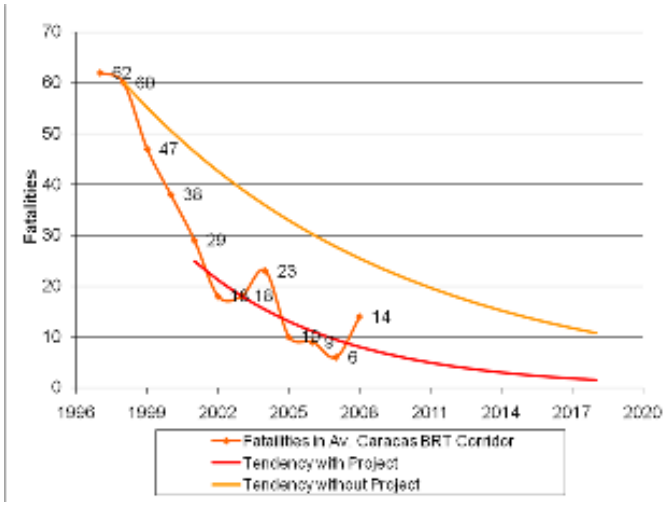
En Bogotá, BRT de alta calidad ha reducido las muertes relacionadas con el tráfico



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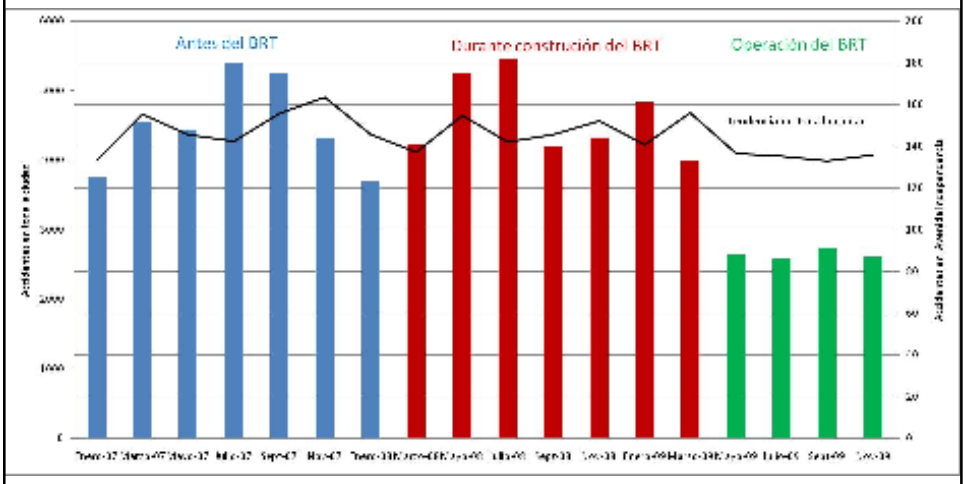
Accidentes antes y después del proyecto de BRT Guadalajara, México



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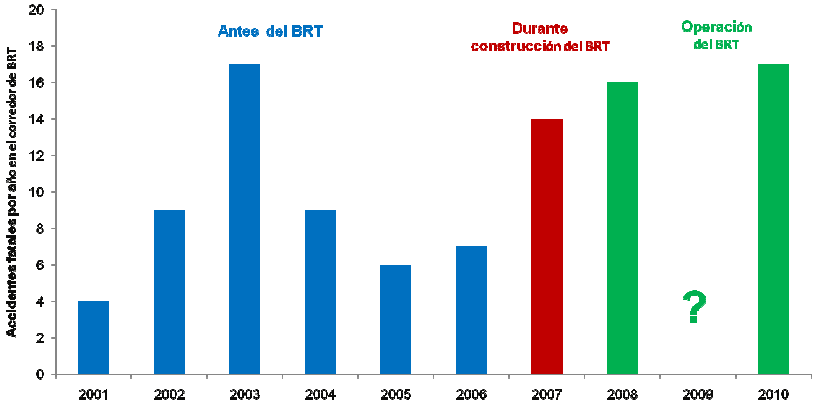
Pero los sistemas mal diseñados pueden aumentar el número de accidentes: el ejemplo de Nueva Delhi



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Las calles que tienen líneas de autobús puede ser muy peligrosas para los peatones: el ejemplo de Nueva York

Una investigación de seguridad vial en Nueva York encontró que las calles con líneas de autobús tienen más atropellamientos que otras calles

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Auditorías de seguridad vial pueden reducir los accidentes de tráfico en corredores de transporte masivo

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Ejemplo de diseño de un corredor BRT antes de la auditoria:
- la auditoría de seguridad vial comprende una evaluación del diseño propuesto
- el auditor identifica problemas de seguridad vial y propone mejoras

Problema 1: Carril de autobus en contraflujo

Recomendación 1: eliminar el carril en contraflujo

• puede reducir accidentes de 15% a 30%

Problema 2: Las cruces peatonales no son perpendiculares a la calle

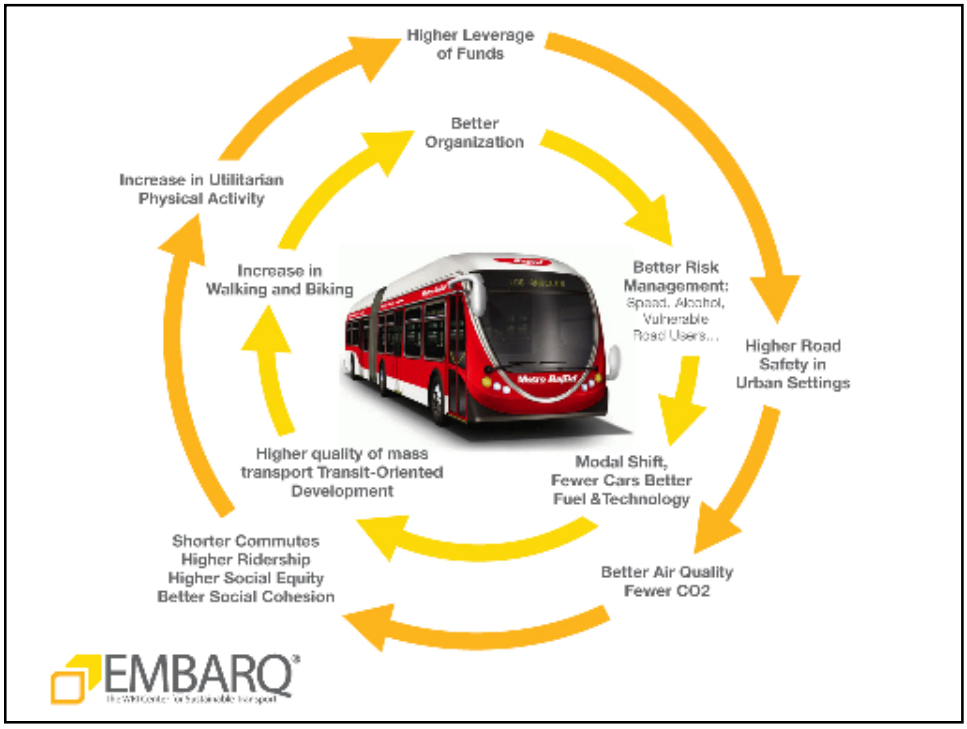
• esto aumenta la longitud del paso de peatones, poniendo los peatones en mayor riesgo

Recomendación 2: Cruces peatonales perpendiculares a la calle

• una cruce peatonale que es de 2 metros mas corto puede reducir los atropellamientos un 10 %

- A road safety audit can reduce crashes on a proposed project by up to 40%
- It is much less costly to implement changes in the planning and design stages than to retrofit an existing piece of infrastructure

30 – 40% reduction in crashes



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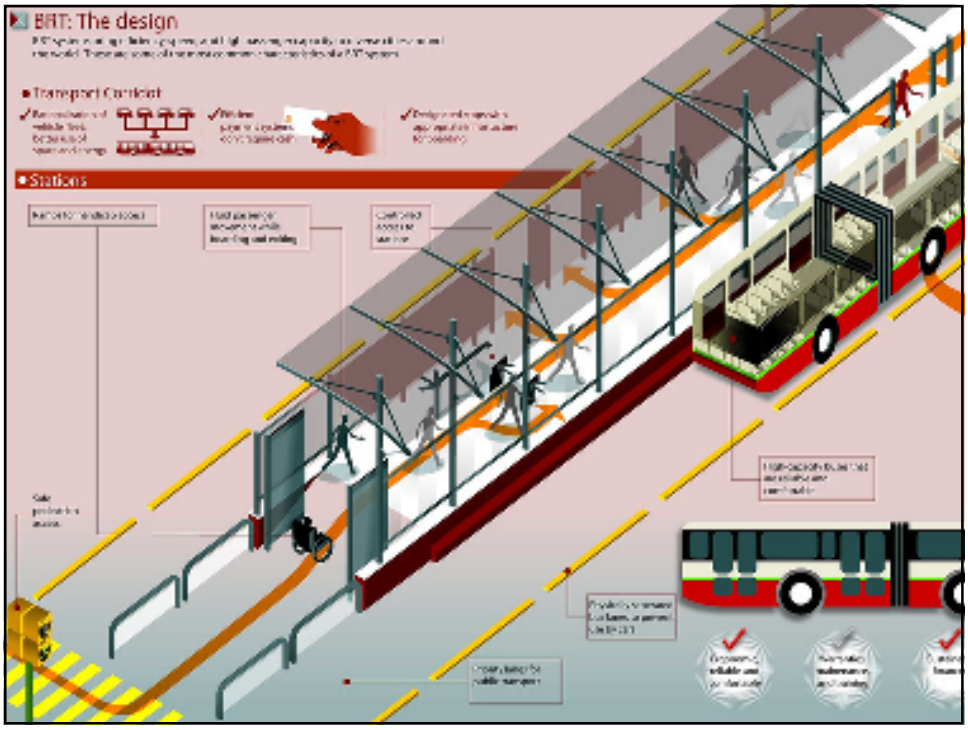

BRT AROUND THE WORLD

- 120 cities with BRT Systems and Bus Corridors
- 4,335 km
- 6,683 stations
- 30,000 buses
- 26.8 million passengers per weekday
  - 1% of the world´s urban population (2010)
  - 1.4 times the combined population of New York and Newark (2010)

Curitiba, RIT, 72 km median busways
2.3 million pax/day
Initial Corridor 1972 - 1982

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Quito, Metrobús-Q, 37 Km median busways,
440,000 pax/day
Initial corridor in 1995

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Bogotá, TransMilenio, 84 Km median busways,
1,7 million pax/day
Initial Corridor 2000

Pereira, Colombia, Megabús, 27 Km Busways, 155,000 pax/day
Initial Operation in 2006

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Pereira, Colombia

Photos courtesy of Megabus, Pereira, Colombia

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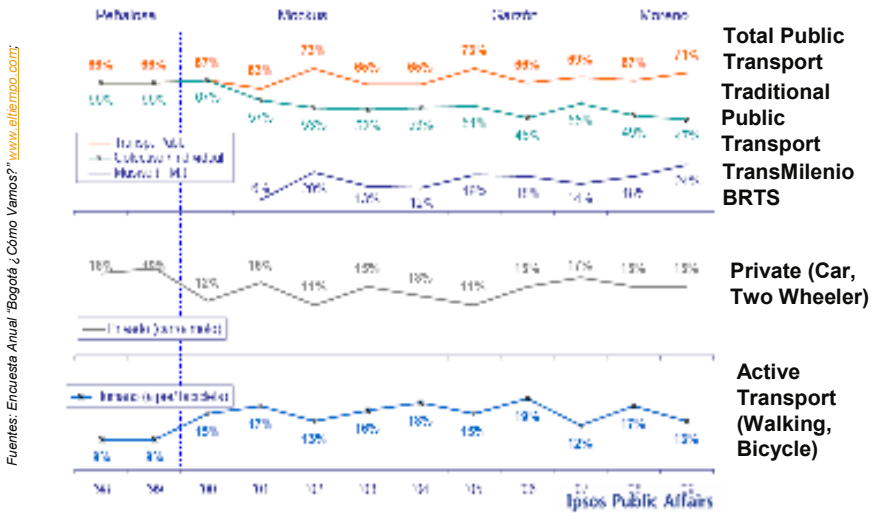
Main mode of transport 1998-2009



Fuentes: Encuesta Anual "Bogotá ¿Cómo Vamos?" www.eltiempo.com;

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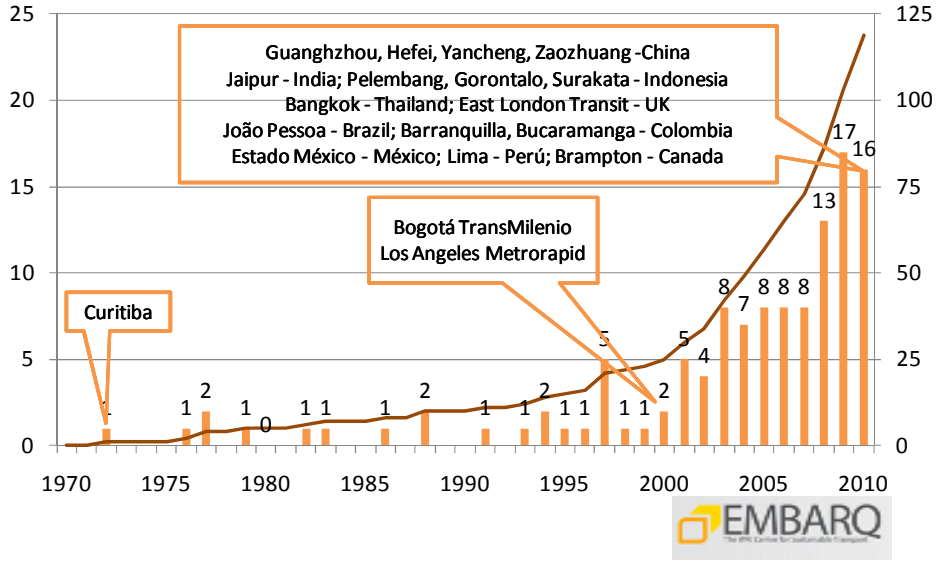
Cities with BRT/Bus Corridors



Source: EMBARQ BRT/Bus Corridors Database, January, 2011

32 cities in LAC with BRT or bus corridors (26% of the world)

- 1,330 km (31%)
- 2,686 stations (40%)
- 16,856 buses (56%)
- 17.6 million passengers per weekday (66%)

Source: CTS Brasil, EMBARQ BRT/Bus Corridors Database, January, 2011

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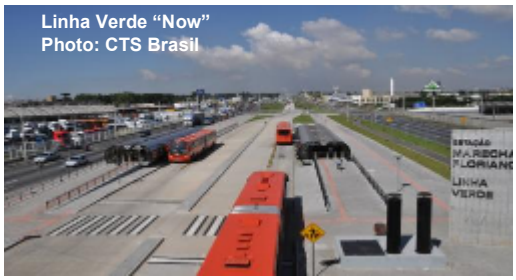
Curitiba new BRT Corridor (2009-2010)



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Curitiba – 35 years with a coordinated land use and transport plan with a BRT backbone

Fuente: Arq. Antonio Juarez Nakamura, Presentación en IV Seminario Internacional de Arquitectura – Universidad Piloto de Colombia, Bogotá, Agosto de 2002

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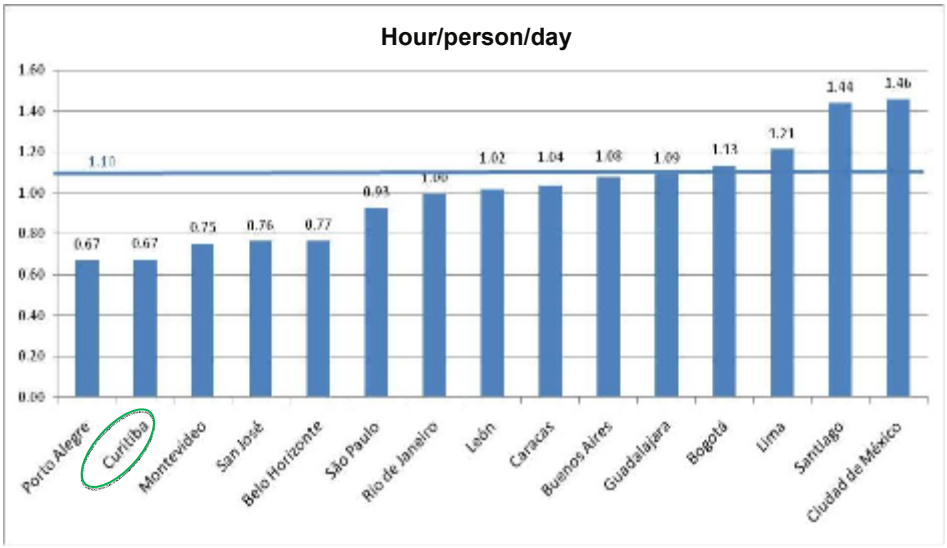
Travel Time (2007)



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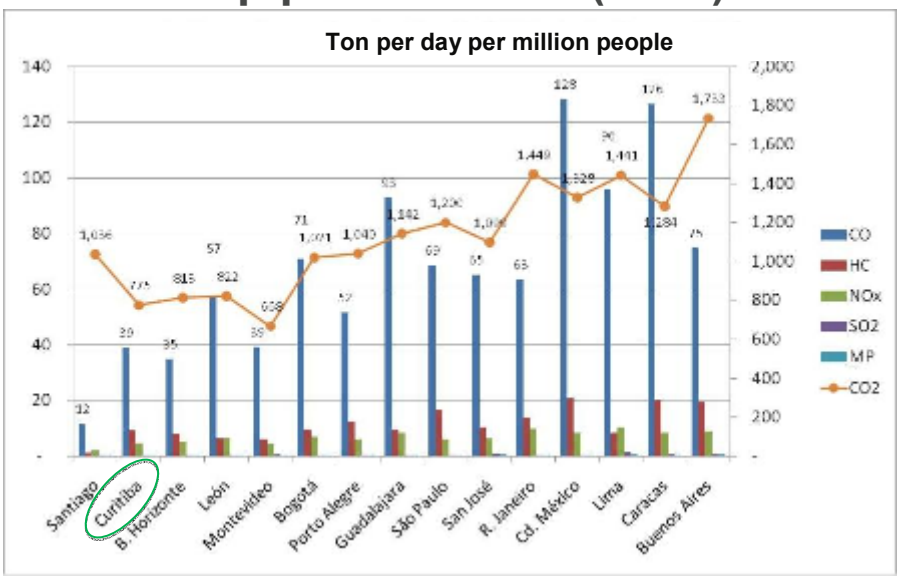
Source: Observatorio Movilidad Urbana CAF http://omu.caf.com/

Tailpipe Emissions(2007)



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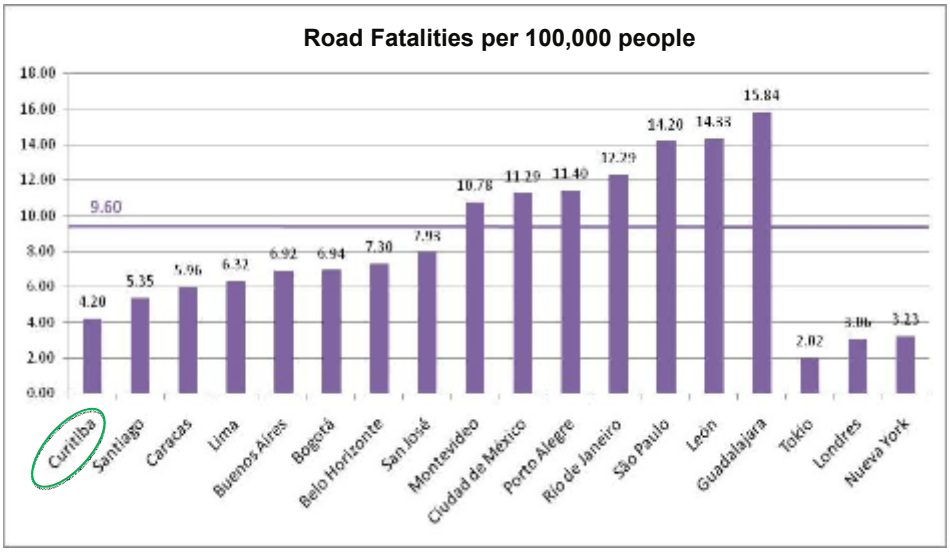
Source: Observatorio Movilidad Urbana CAF http://omu.caf.com/

Road Safety (2007)



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Source: Observatorio Movilidad Urbana CAF http://omu.caf.com/

Common problems

- Rushed implementation
- Very tight financial planning
- Very high occupancy levels
- Early deterioration of infrastructure
- Issues with technological components
- Insufficient user education

Latin American Association of Integrated Bus Systems and BRT Agencies

SÓCIOS FUNDADORES

SIBRT

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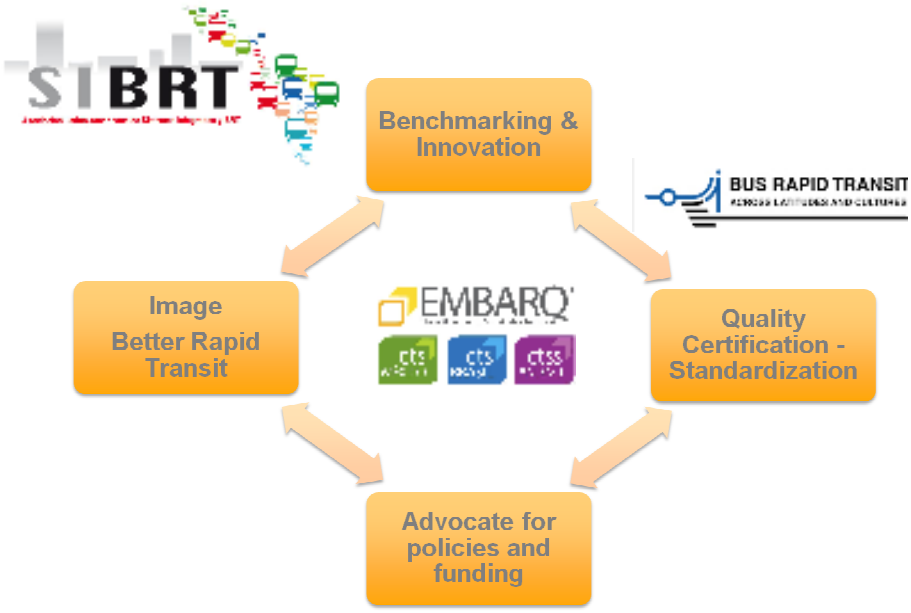

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- **Decade of Action for Road Safety 2011-2020**

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DECENIO DE ACCIÓN PARA LA SEGURIDAD VIAL
2011-2020

EXIT

DECADE OF ACTION FOR ROAD SAFETY 2011-2020

5 pillars for implementing activities at national and local levels

- Pillar 1: Road safety Manage ment
- Pillar 2: Safer roads and mobility
- Pillar 3: Safer Vehicles
- Pillar 4: Safer road users
- Pillar 5: Post-crash response

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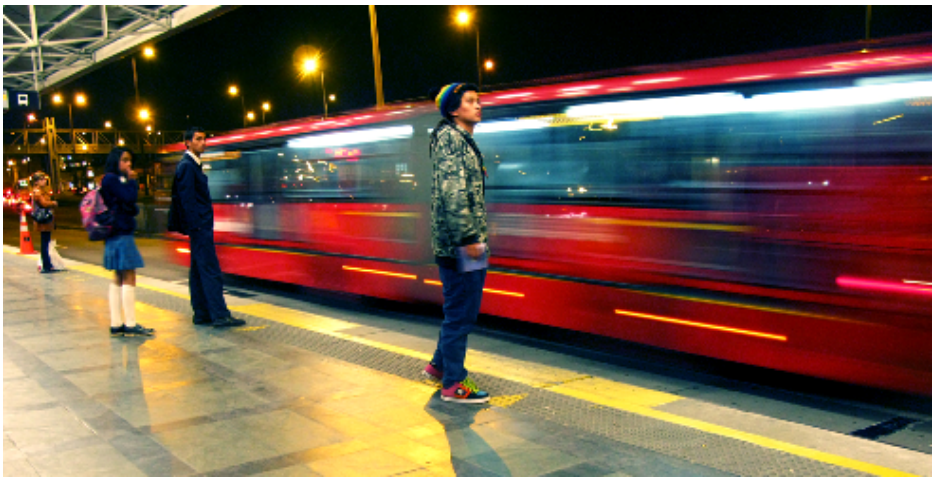

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