Movilidad Sostenible

Saving children’s lives through sustainable mobility

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LMICs

92% of traffic fatalities

50% of vehicle fleet
Low and middle-income countries need to address issues such as inadequate road design; unsafe infrastructure and urban expansion.
SAFE SYSTEM PRINCIPLES

- Humans Make Errors
- Humans Are Vulnerable to Injury
- Responsibility Is Shared
- No Death or Serious Injury is Acceptable
- Proactive vs. Reactive
ACTION AREAS FOR SAFE SYSTEM

• Land Use Planning
• Street Design and Engineering
• Improved Mobility Options
• Speed Management
• Enforcement, Laws and Regulation
• Education and Capacity Building
• Vehicle Design and Technology
• Post Crash Emergency Response And Care
OUR APPROACH

AVOID motorized travel through the integration of sustainable land use and transport planning – increasing accessibility, saving lives, and protecting the environment.

SHIFT to safer, healthier and more environmentally friendly modes, such as public and active transport. Or preserve the current share of these modes, particularly in developing countries.

IMPROVE vehicle and fuel technology of all modes of transport, and ensure safe road design and operations, to maximize health and environmental efficiency of each kilometer traveled.
AVOID Unnecessary VKT

(FHWA Highway Statistics, 2008; Regression Analysis: EMBARQ)
AVOID URBAN SPRAWL TO PREVENT DEATHS

Sources: Alain Bertaud (2012) Clearing the air in Atlanta: Transit and smart growth or conventional economics?
SHIFT to Safer & Sustainable Mobility
BRT CORRIDORS SHOW REDUCED CRASH RATES

SOURCE: EMBARQ Analysis, based on data provided by TRANSMILENIO S.A.
BRT CORRIDORS SHOW REDUCED CRASH RATES

Before and after data from Guadalajara: Calzada Independencia 2007-2011

Source: Computed from statistics provided by Secretaria de Vialidad y Transporte de Jalisco 2011

EMBARQ analysis of data from Jalisco State, 2011
BRT CORRIDORS SHOW REDUCED CRASH RATES

Passengers per hour per direction (peak)

- 2 general traffic lanes: 3,194
- 1 lane of bus rapid transit: 5,000

Crashes per year

- 2 general traffic lanes: 726
- 1 lane of bus rapid transit: 6
Motorcyclists are **30x** more likely to be injured and **200x** more likely to die in traffic when compared to a public transport user.
COPENHAGEN: RELATIVE CYCLIST RISK

Source: 2014 Copenhagen Bicycle Account
Bogota found that adding more than 100 km of bikeways helped reduce bicyclist deaths by **47.2 percent** between 2003 and 2013, and increased bicycle use from just over **3 percent** of all daily trips to over **6 percent**.

IMPROVE Design for Safer Streets
AT GREATEST RISK: PEOPLE WALKING, BICYCLING AND RIDING MOTORCYCLES

<table>
<thead>
<tr>
<th>City</th>
<th>Pedestrian, Cyclist and Motorcyclist Fatalities</th>
<th>All other Traffic Fatalities (includes 4 wheelers, mass transit etc)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accra</td>
<td>68%</td>
<td>32%</td>
</tr>
<tr>
<td>Addis Ababa</td>
<td>81%</td>
<td>19%</td>
</tr>
<tr>
<td>Bandung</td>
<td>71%</td>
<td>29%</td>
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<td>Bogota</td>
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<td>Mumbai</td>
<td>91%</td>
<td>9%</td>
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<tr>
<td>Sao Paulo</td>
<td>83%</td>
<td>17%</td>
</tr>
<tr>
<td>Shanghai</td>
<td>80%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Source: WRI Research, Data collected by WRI
SIDEWALK CONDITIONS AND STREET CROSSING SAFETY SATISFACTION IN FOUR CITIES

- Arequipa, Peru: 24% satisfied with sidewalks, 20% feel safe crossing streets
- Indore, India: 10% satisfied with sidewalks, 9% feel safe crossing streets
- Rio de Janeiro, Brazil: 24% satisfied with sidewalks, 27% feel safe crossing streets
- Mexico City, Mexico: 32% satisfied with sidewalks, 28% feel safe crossing streets

Source: WRI/EMBARQ household surveys in these cities, 2011 published in Cities Safer by Design
PRIORITY FOR PEDESTRIANS

Reduction in speeds, slows vehicles turning and passing through intersections, and prioritizes pedestrian passing on even pavement.

Source: institute for Transportation Engineers 2013
A new cycle track in New York has reduced speeding rates from 74 percent to 20 percent. **Crashes and injuries of all kinds dropped by 63 percent.**
Mass transit has a lot of people moving to and from it, so making this a safe connection is key. Often a corridor might be built or run without much consideration of this, so things like providing traffic calming, or raised pedestrian crossings to stations as seen here in Istanbul can help improve safety and access.
THANK YOU!
GRACIAS!
OBRIGADA!

Marta Obelheiro