

---

# The Future of Sustainable Transport enabling Liveable Cities

Livable Cities Symposium

Izmir, 20 November 2014

Holger Dalkmann

*Director, EMBARQ*

*World Resources Institute*

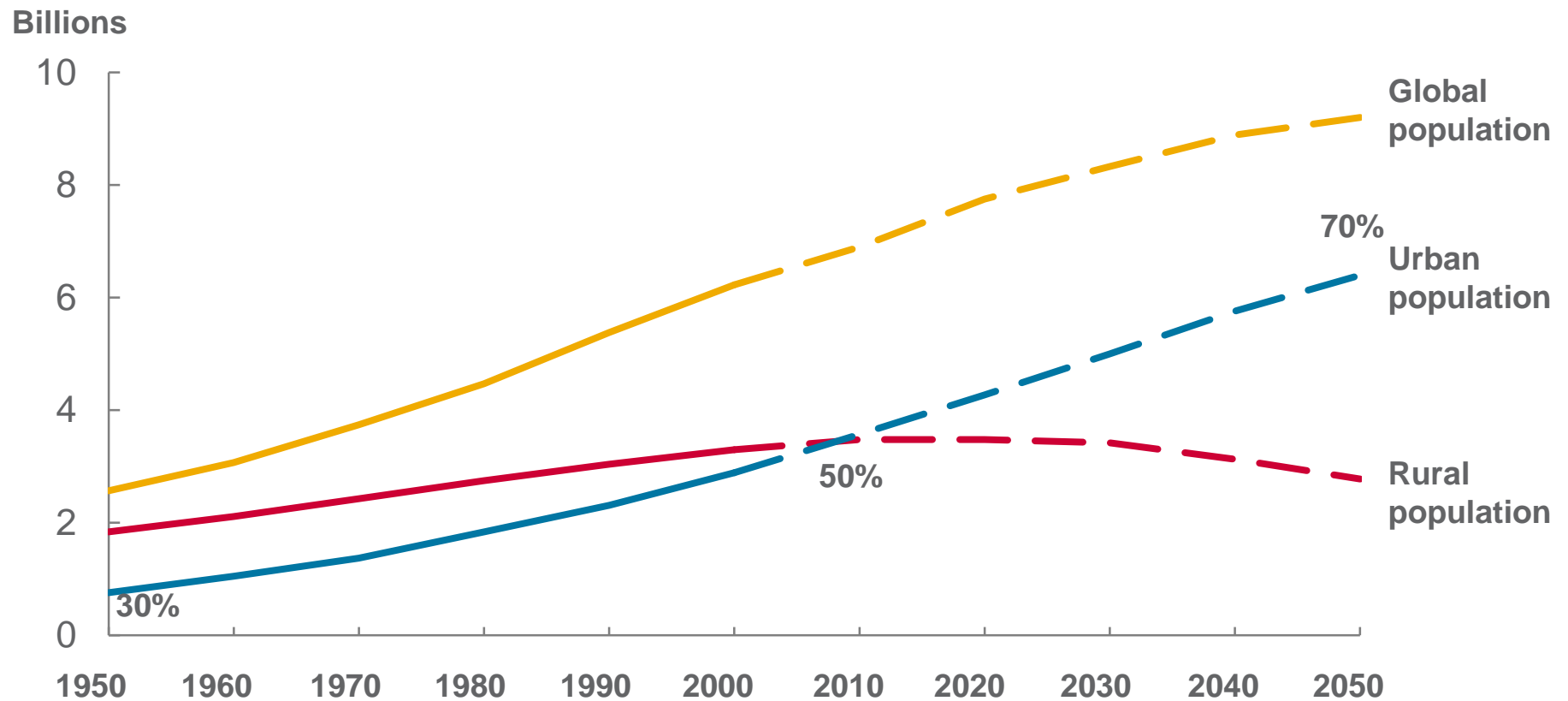


WORLD  
RESOURCES  
INSTITUTE

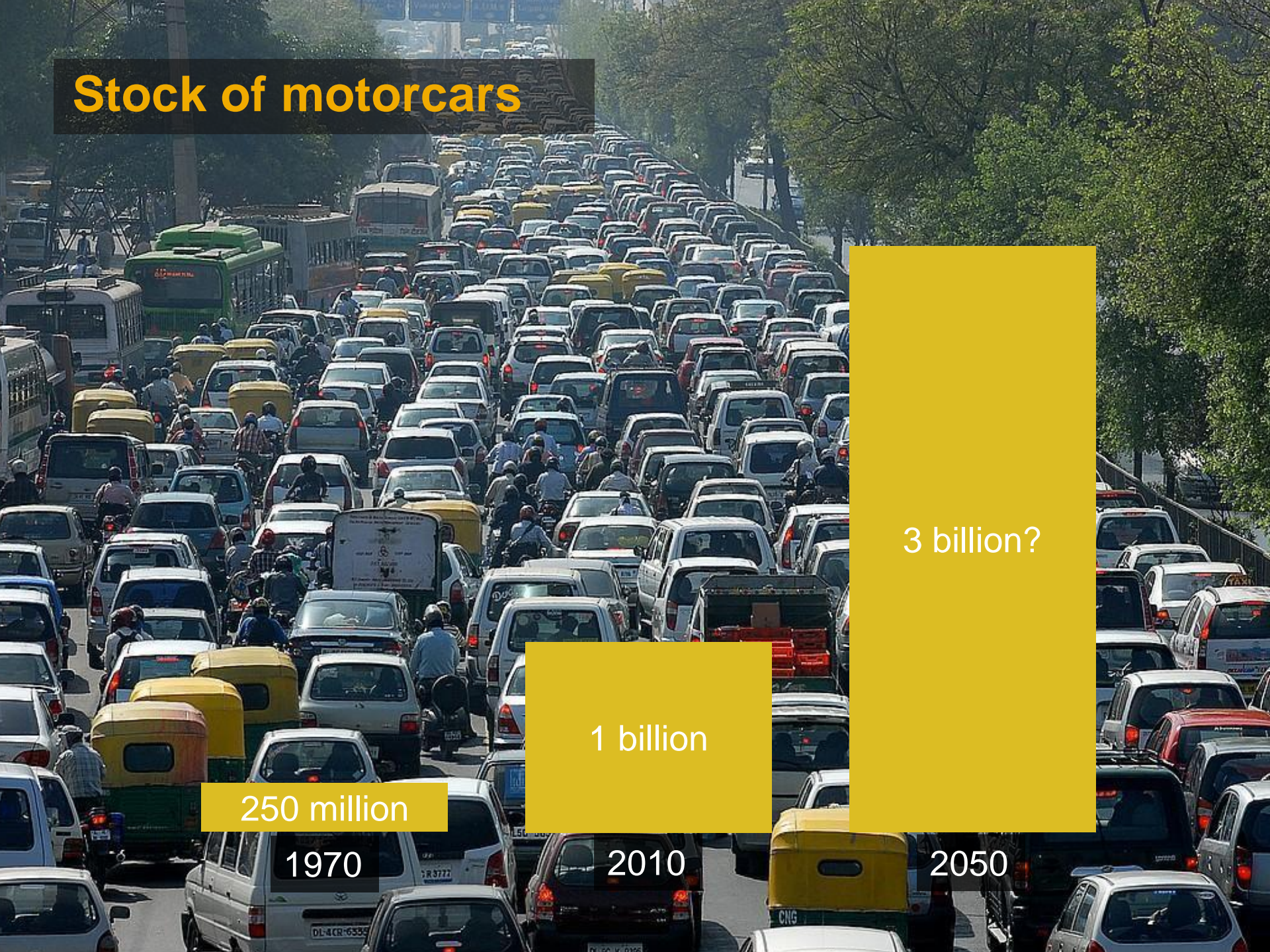


# THE URBANIZATION CHALLENGE

- Over 50% of the global population now live in cities and urban areas, rising to 70% by 2050.



# Stock of motorcars



250 million

1970

1 billion

2010

3 billion?

2050

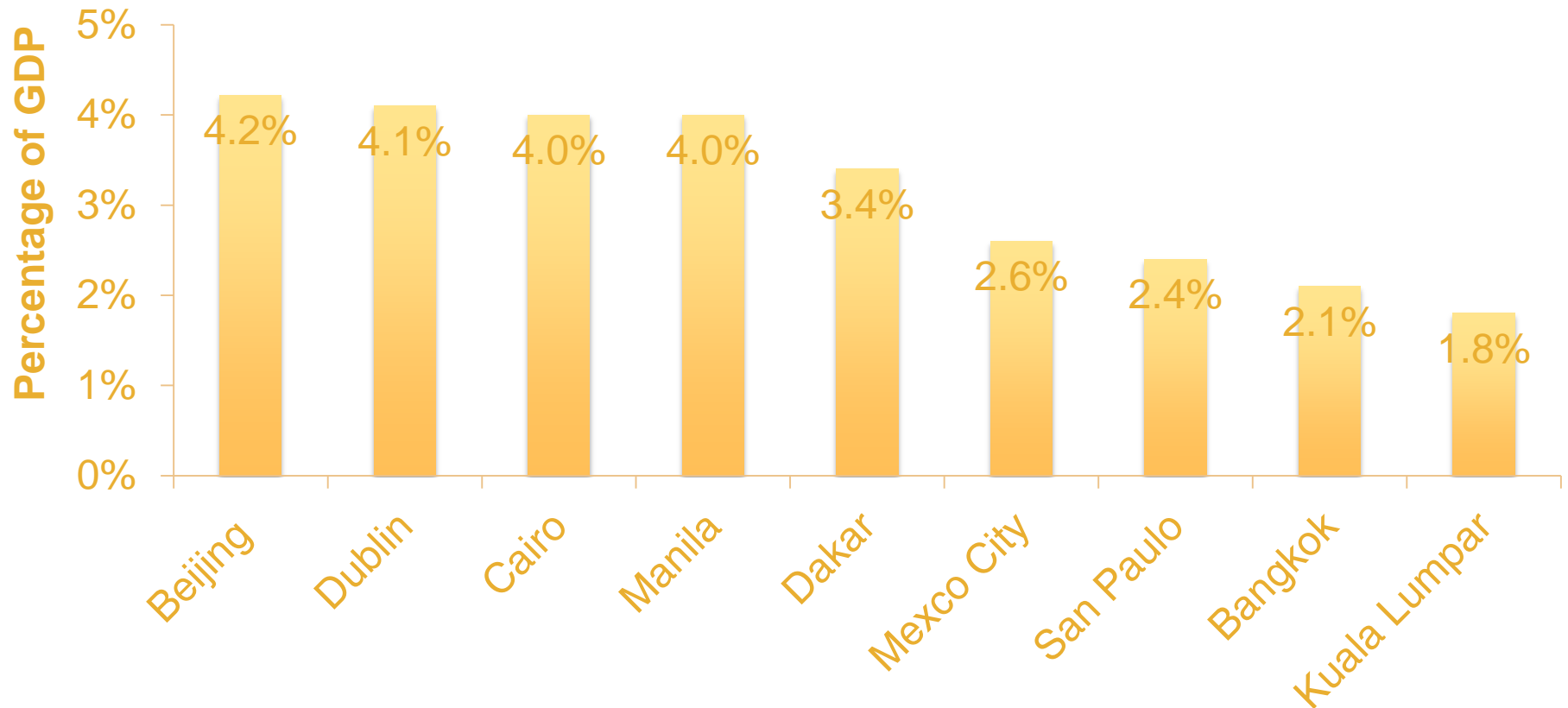
# Local Issues: Congestion



# COSTS OF TRAFFIC CONGESTION

➤ Traffic congestion costs some cities more than 4% of GDP

Cost of Traffic Congestion as a Percentage of GDP



Sources: IBM Institute for Business Value, Smarter cities for smarter growth. Li-Zeng Mao, Hong-Ge Zhu, and Li-Ren Duan (2012) The Social Cost of Traffic Congestion and Countermeasures in Beijing. Sustainable Transportation Systems: pp. 68-76.

# Global Issues: Air Quality

---

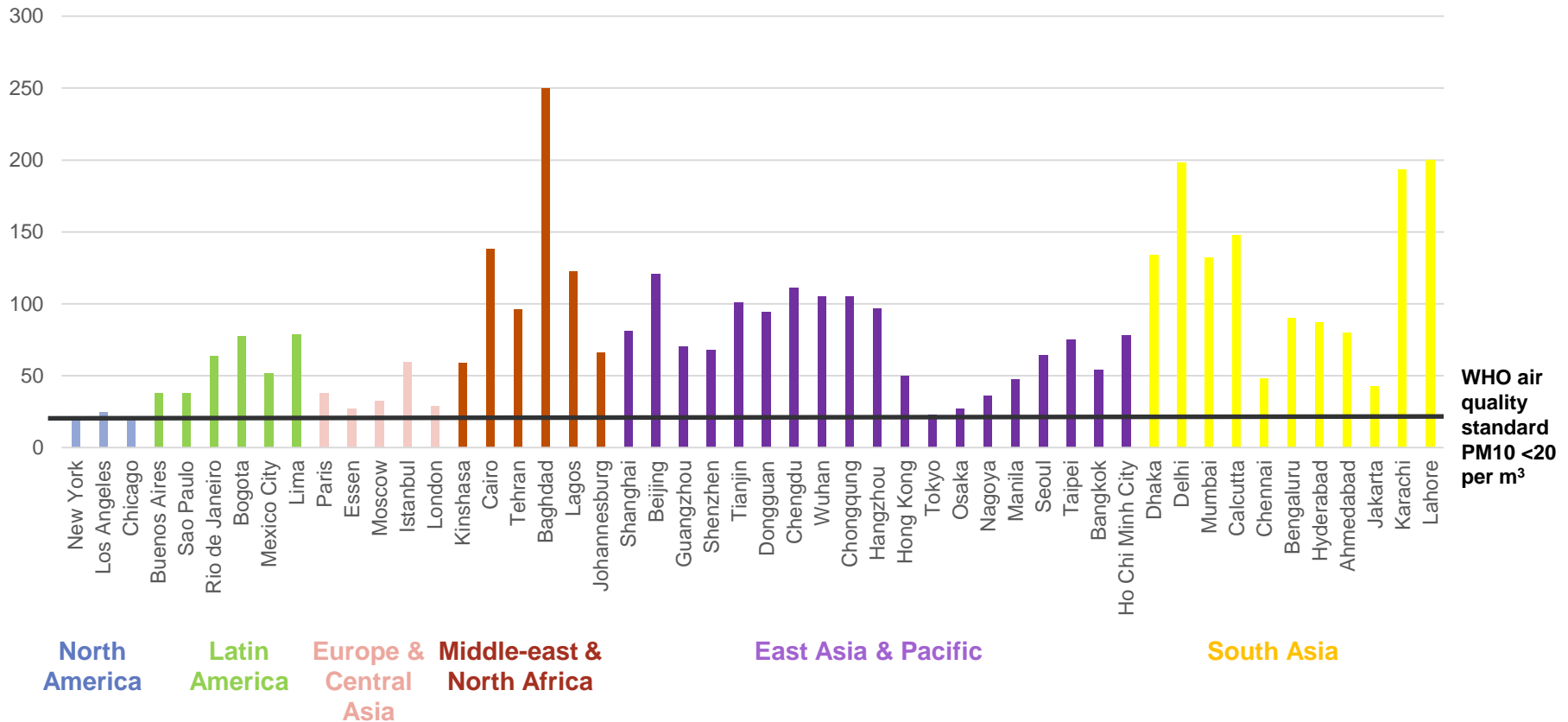


2.1

# AIR QUALITY IMPACTS

➤ Of a selection of the world's biggest cities by population meet WHO air quality standards

Particulate matter per m<sup>3</sup> for top 50 cities – higher particulate matter means worse air quality



WHO air quality standard PM10 <20 per m<sup>3</sup>

# Local Issues: Road Safety

---



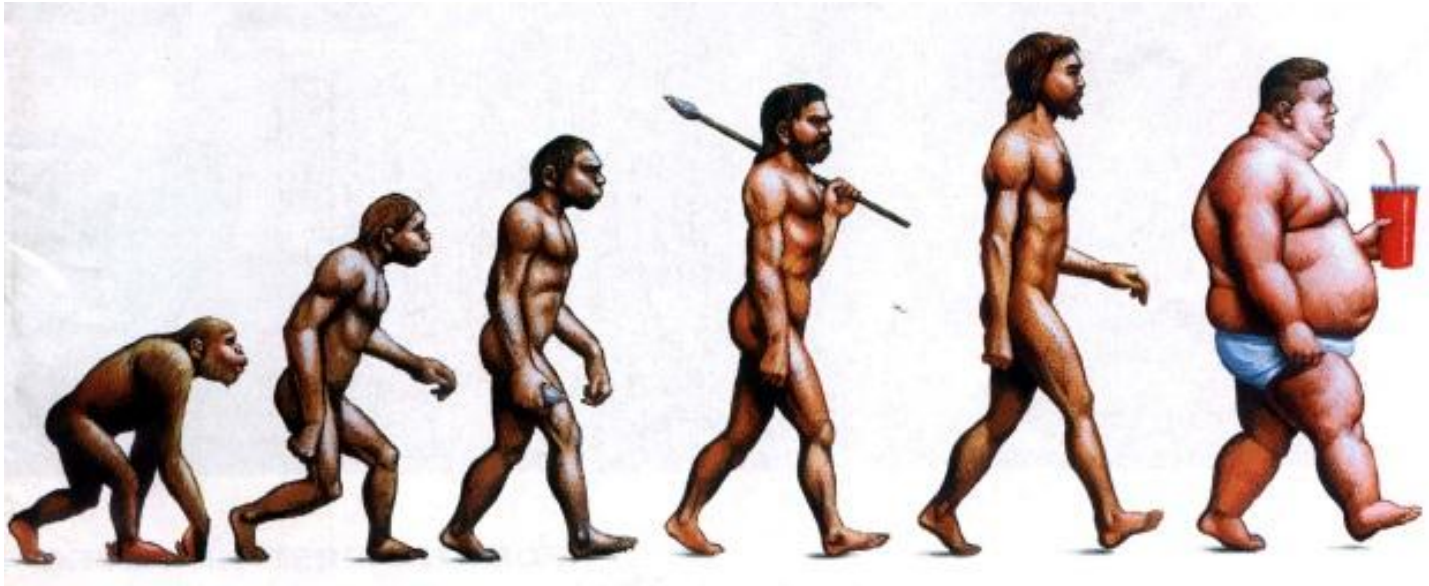
1.3



# Local Issues: Physical Inactivity

---

- 3.2 million people are affected for illnesses derived from physical inactivity and obesity



# Paradigm Shift: Trend vs. Leapfrogging

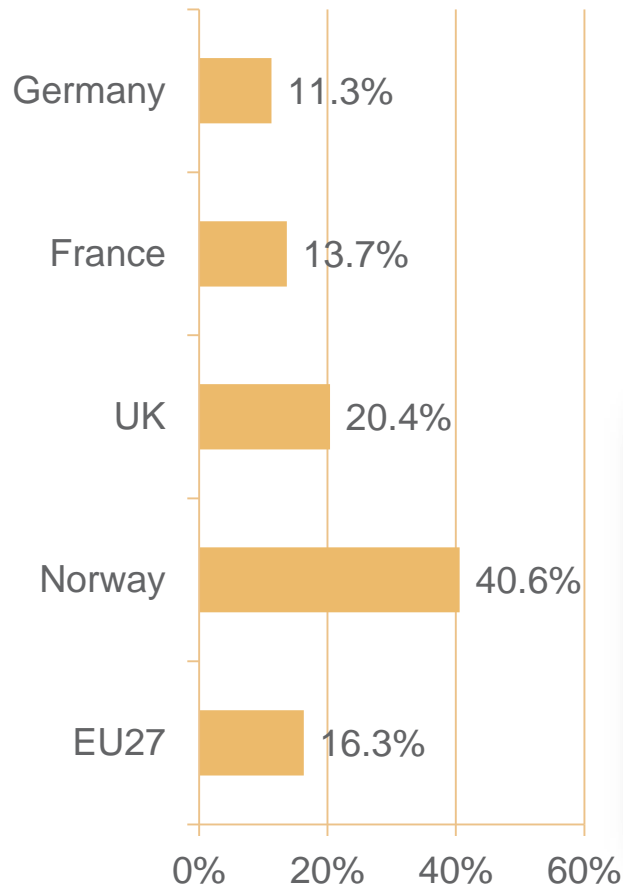
- Though it may seem impossible or improbable, there is precedent



Cheonggyecheon, Seoul, South Korea

# Paradigm shift: Cigarette smoking has declined

- Percentage decrease in the adult population who smokes daily from 2000 – 2010



# Disruptive business ideas: Traditional Hotels vs airbnb



IHG

- 65 years
- 645K rooms
- 100 countries



Hilton

- 93 years
- 610K rooms
- 88 countries



Accor

- 44 years
- 530K rooms
- 92 countries

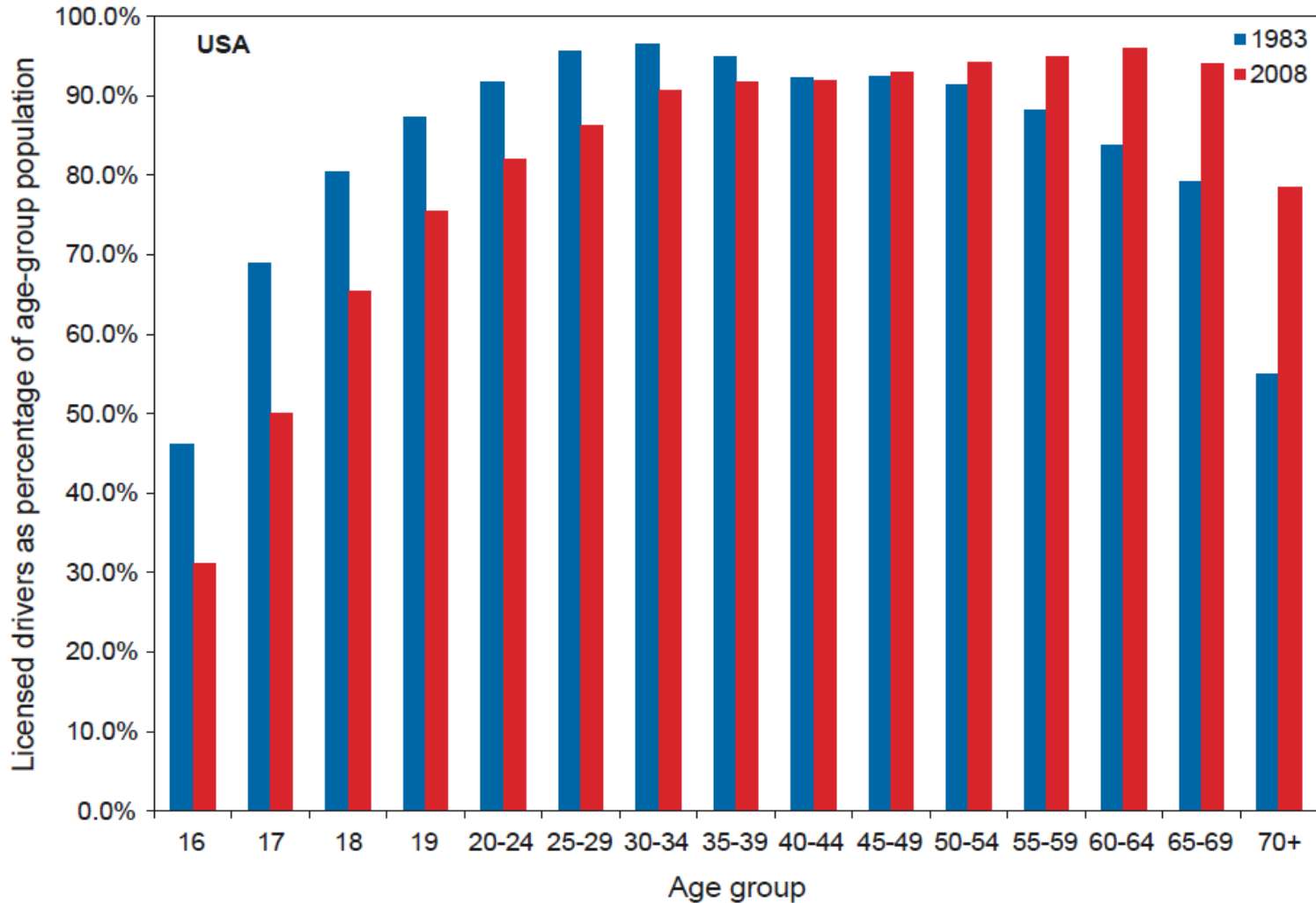
VS



Airbnb

- 4 years
- 650K rooms
- 192 countries

# US: Fewer Young People Have Drivers Licenses



Source: US Federal Highway Administration

# What would a paradigm shift look like?



# Paradigm Shift: New York City

---



# COMPACT MATTERS: ATLANTA VS. BARCELONA

- The 2 have similar populations and wealth levels, but very different carbon productivities and costs of infrastructure.

## ATLANTA'S BUILT-UP AREA



Population: **2.5 million**  
Urban area: **4,280 km<sup>2</sup>**  
Transport carbon emissions: **7.5 tonnes CO<sub>2</sub> per person (public+ private transport)**

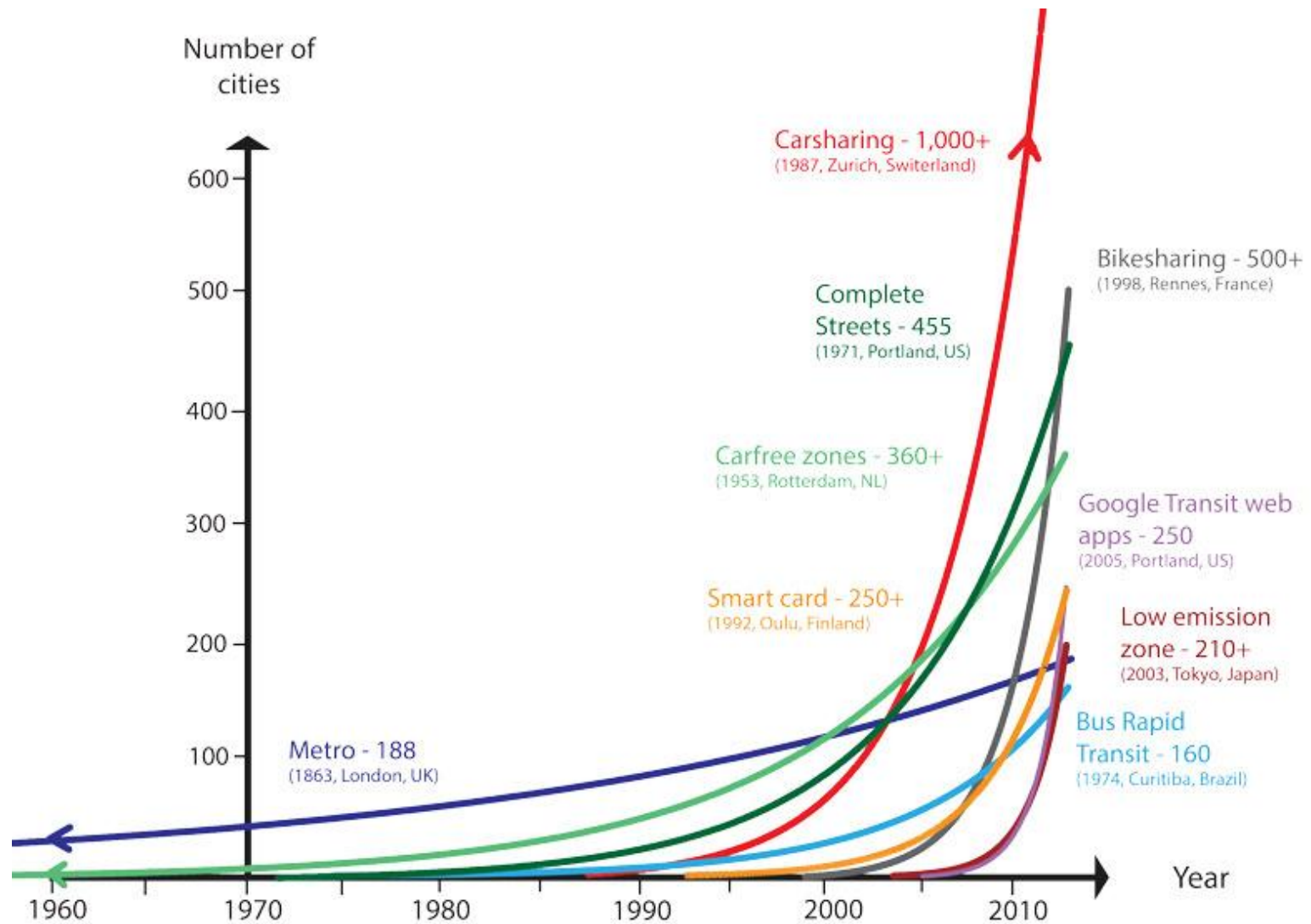
## BARCELONA'S BUILT-UP AREA



Population: **2.8 million**  
Urban area: **162 km<sup>2</sup>**  
Transport carbon emissions: **0.7 tonnes CO<sub>2</sub> per person (public+ private transport)**



# New Trends on the Rise

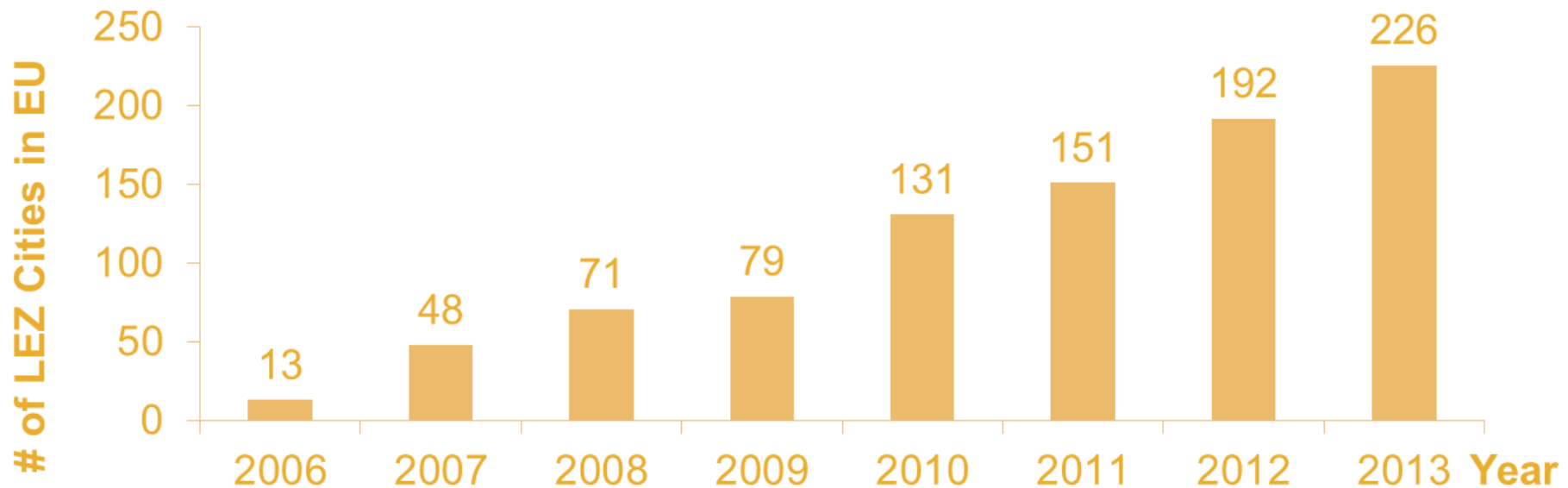


**Sustainable Transport Adoption**



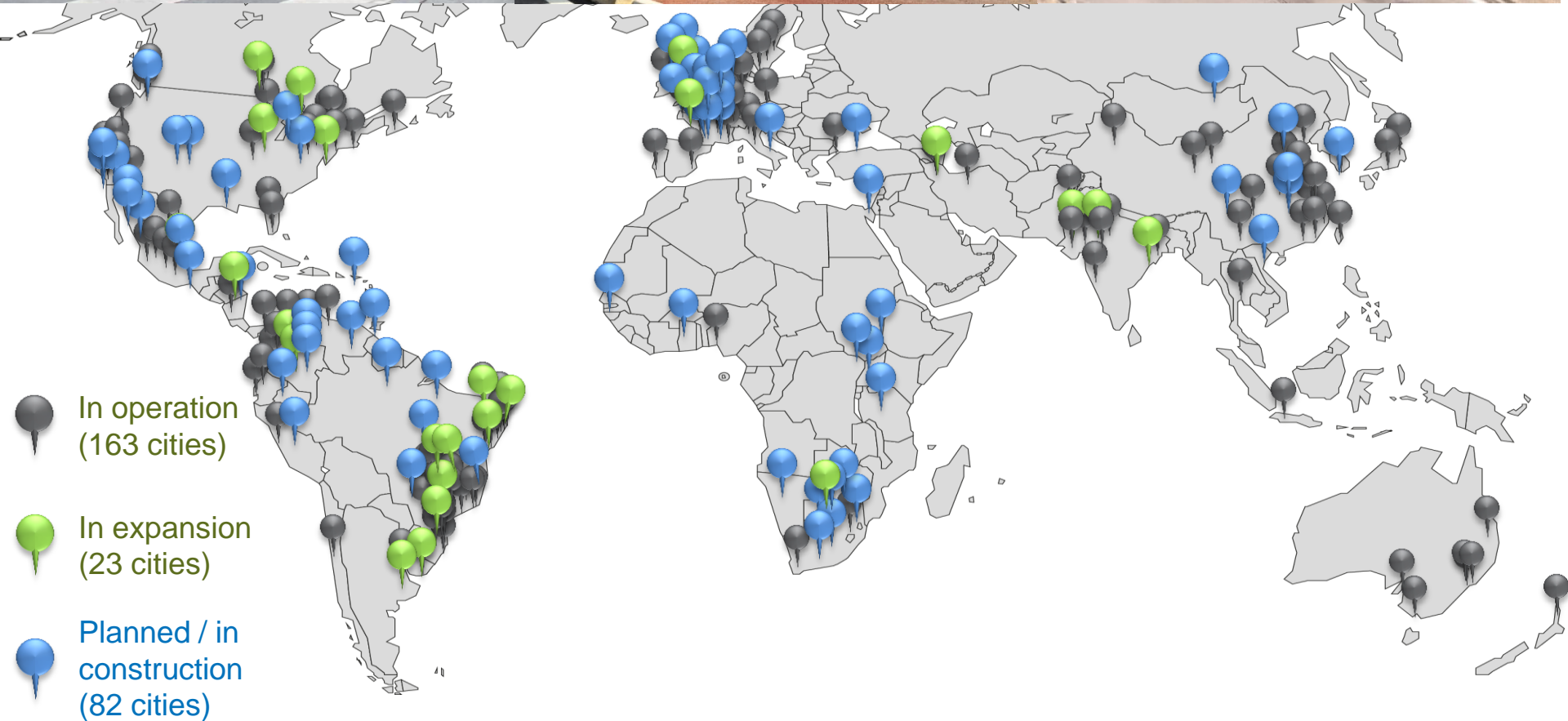
# Low Emission Zones

- Received wide implementation due to EU's health-based air quality standard;
- Additional 100 EU cities will implement LEZs



# BRT and busway systems in the world

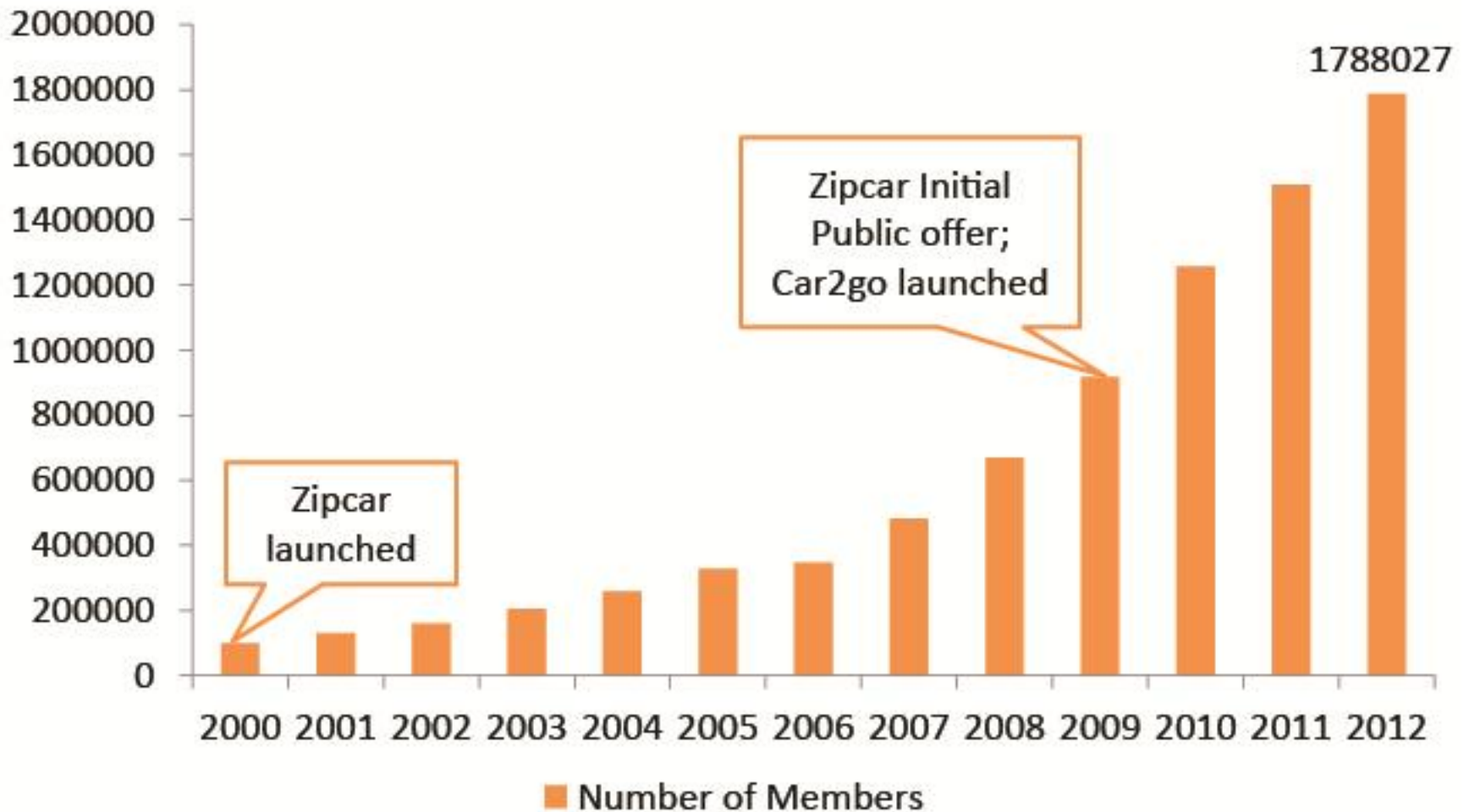
Photo: CTS EMBARQ Mexico



# Global Growth of Bike-Sharing 2000-2013



# Global Growth of Car Sharing 2000-2012



# Ridesharing: Uber, Lyft, Sidecar...



UBER

ON DEMAND RIDE SHARING



HAIL  
O™

Side•car  
a whole new way to get around

# Keys to a Paradigm Shift

- Political Will – Leadership and Community Support
- Finance – Infrastructure and Operations
- Technical Capacity to Plan, Implement, Improve
- Enable entrepreneurial environment for disruptive solutions



# Thank You

Holger Dalkmann

HDalkmann@wri.org

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

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

[www.thecityfix.com](http://www.thecityfix.com)