BAQ & Regional EST Forum in Asia 2014

- Country Roundtable Dialogue on EST

- Next Generation Sustainable Transport Solutions in Post-2015 Development Era

Amit Bhatt, Strategy Head – Urban Transport, EMBARQ India

Nov 20, Colombo

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Post 2015 Development Summit

- Sustainable Transport aspects
  - Safety
  - Accessibility
  - Sound public transportation
  - Universal access

- SDG 11 - focus on making cities and human settlements inclusive, safe and sustainable

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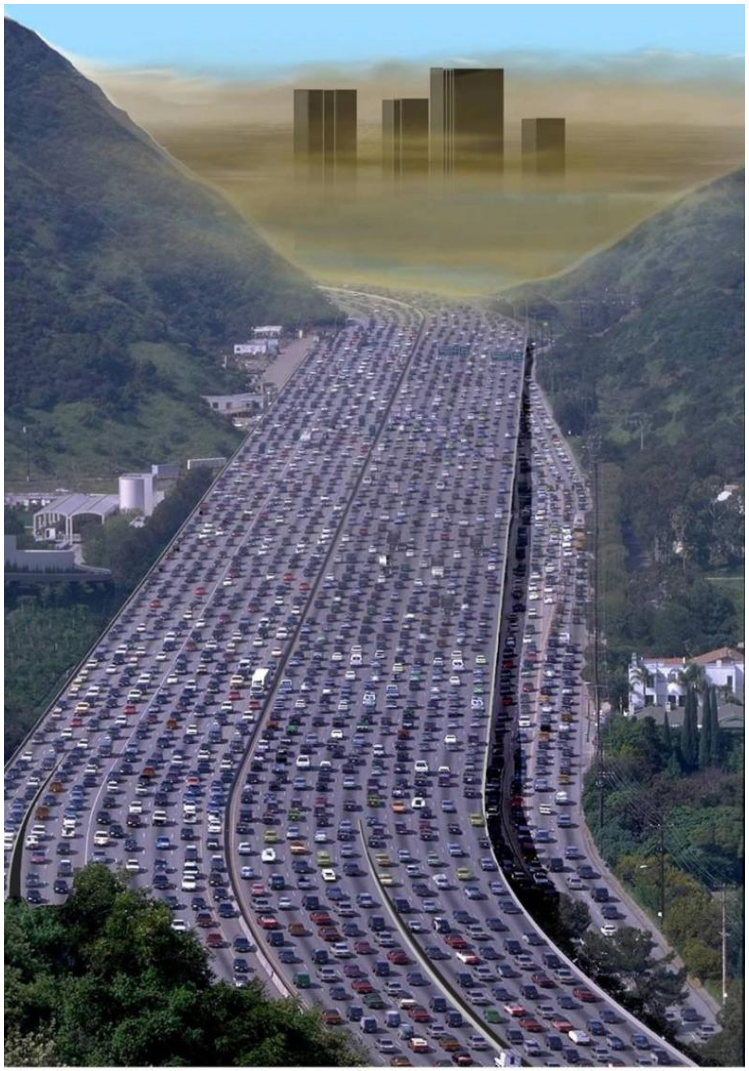
Car Oriented Development Paradigm Continues



Courtesy Transfuture.net

- China plans to build 34,000 kilometres of new expressways and 500,000 kilometres of new roads from 2010 to 2015
- Many other countries are following the same

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ROAD SAFETY

140,000 deaths every year in India due to road traffic crashes

AIR POLLUTION

627,426 premature deaths every year in India due to air pollution

http://www.topnews.in/law/files/delhi-pollution.jpg

POOR MOBILITY

LACK OF UNIVERSAL ACCESS

Paradigm Shift is Coming

Moving Cars

Moving People

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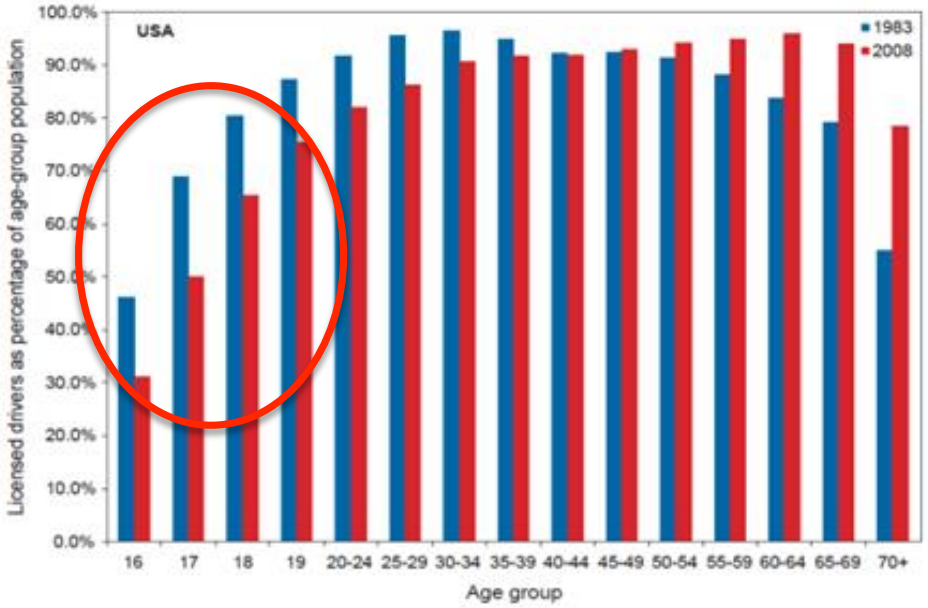
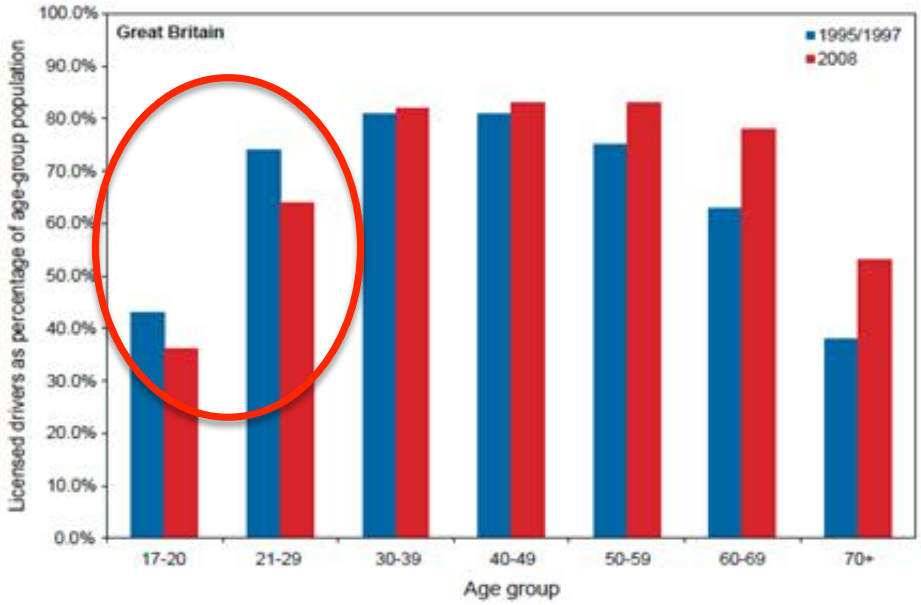
And a new generation is bringing it along

Licensed drivers as proportion of age group





Sivak and Schoettle, 2011 http://deepblue.lib.umich.edu/bitstream/handle/2027.42/86680/102764.pdf

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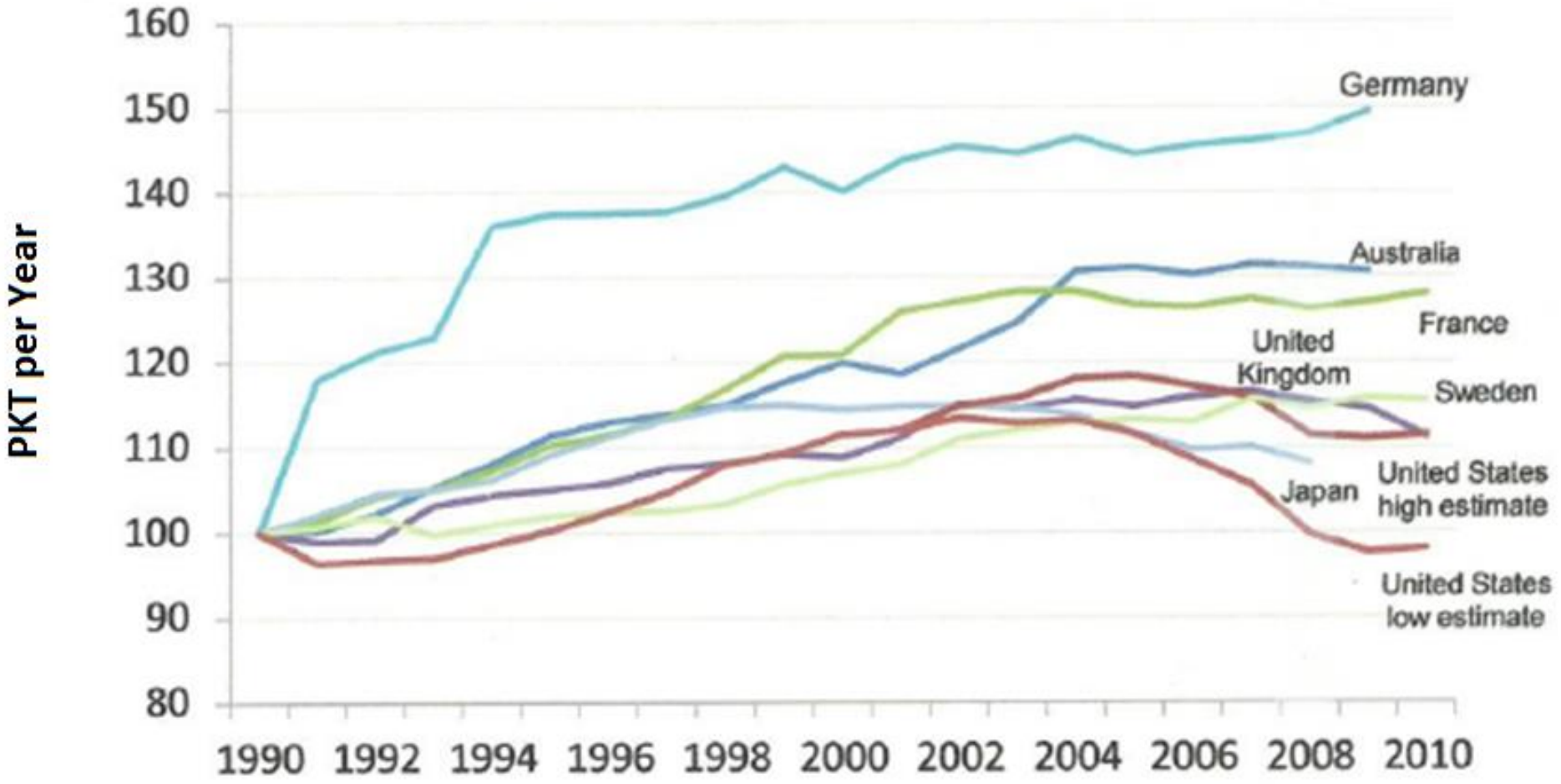
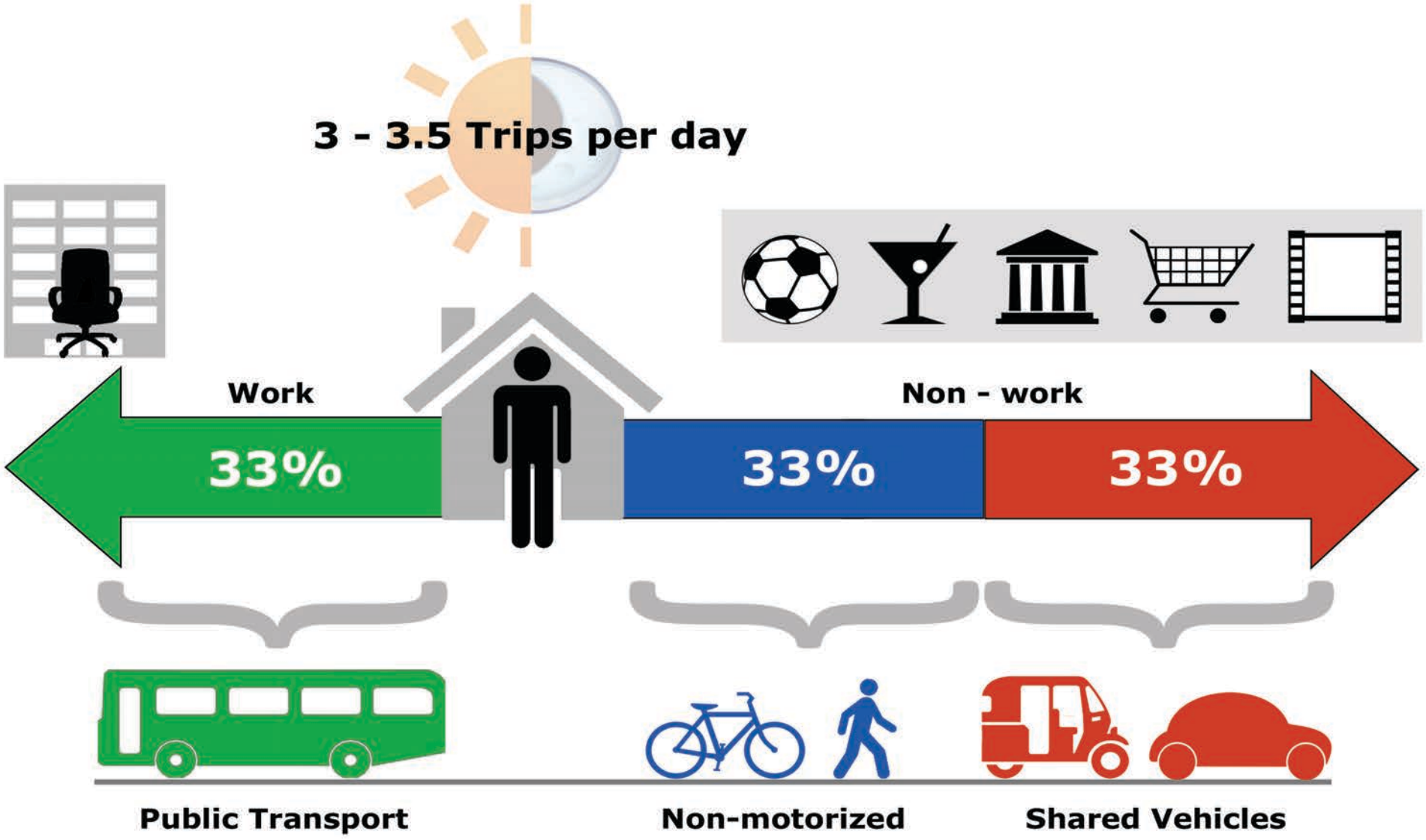
Passenger Car Travel (1990=100) Peak Travel?

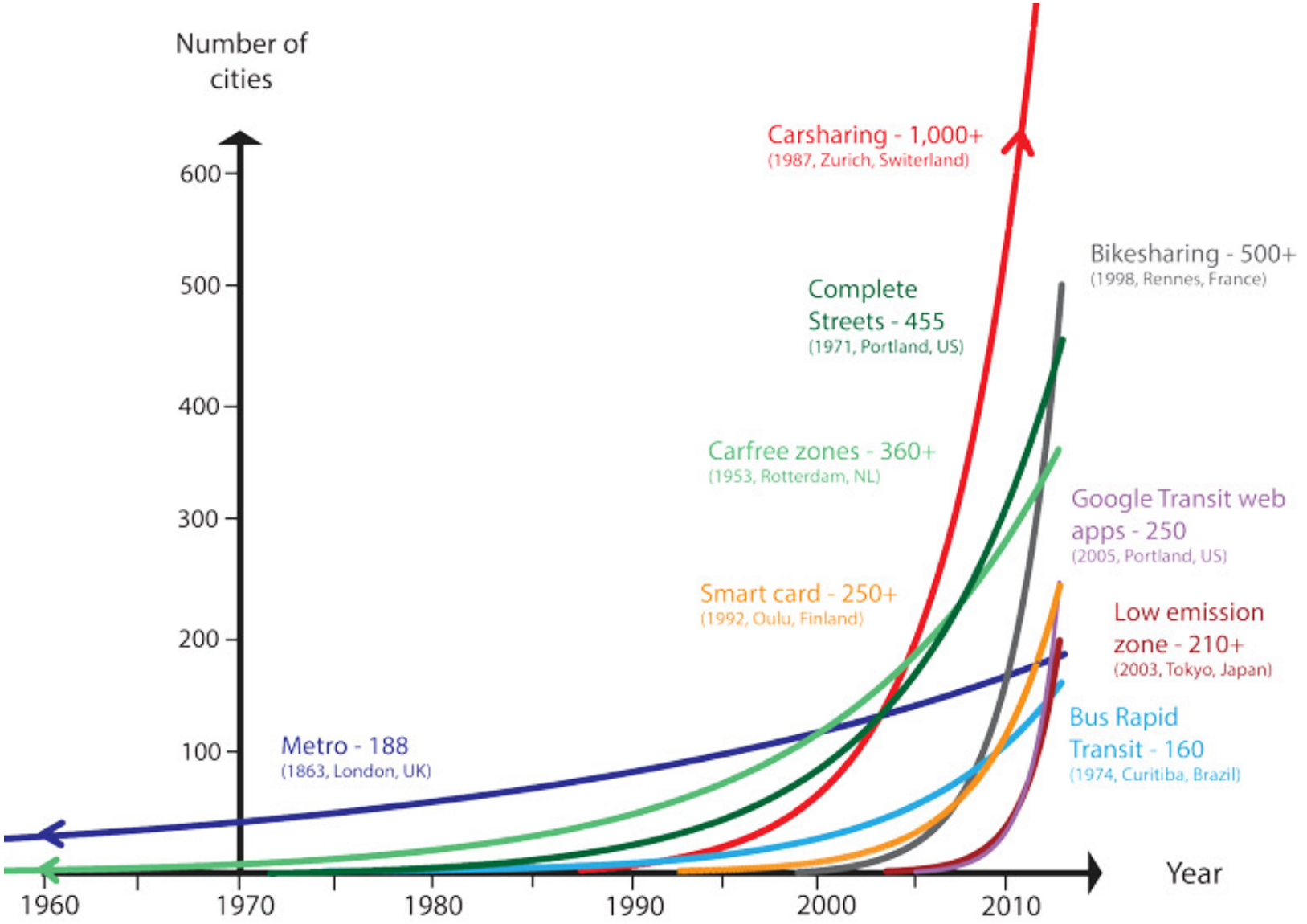


Source: International Transport Forum 2012



INDIVIDUAL ASPIRATION

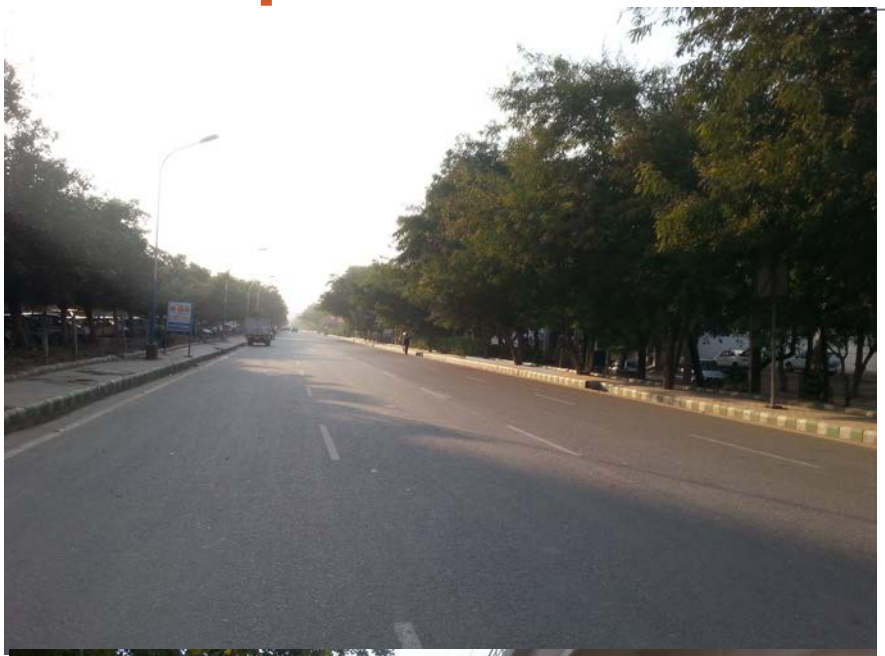
New Trends Picking up



Area	Concept	First year (City) Initial year of implementation	Cities Number of cities to date	Stage
Car restrictions & pricing approaches	Congestion pricing	1975 (Singapore) [1]	6	Emerging
	Low emission zones	2003 (Tokyo, Japan) [2]	200+	Mainstream in Europe
	Vehicle quota system	1990 (Singapore)	5	On the rise in China
Mass transit	Metro	1863 (London, UK) [3]	188	Mainstream in EU & N-A; tipping in China
	Bus Rapid Transit	1974 (Curitiba, Brazil) [4]	153	Tipping in Latin America and China; emerging in India
Shared mobility	Carsharing (2-way) [5]	1987 (Lucerne & Zurich, Switzerland) [6]	1,000+	Mainstream in EU & N-A; emerging in developing countries
	Bikesharing [7]	1998 (Rennes, France)	[8]Nearly 500	Tipping in EU, the Americas. and China
Urban design for access	Transit Oriented Development	Late 1800s and Early 1900s (New York, London & others)	-	Mainstream in Europe, Japan, Hong Kong, Singapore; tipping in the US
	Carfree zones [9]	1953 (Rotterdam, NL)	360+ (213 in Europe)	Mainstream in European cities; tipping in North and Latin American cities
	Complete street [10]	1971 (Portland, Oregon, USA) [11]	455 (in the US)	Tipping in the US
Multimodal integration	Smart tickets [12]	1989 (Zurich, Switzerland) 1996 (Seoul, South-Korea); 1997 (Hong Kong, China) [13]	250+	Tipping in developed country cities and some emerging economies like China
	Information Integration [14] (example: Google Transit web app)	2005 (Portland, Oregon, USA) [15]	250+	Tipping in most developed country cities; On the rise in emerging economies

Next Generation Sustainable Transport

Complete Streets



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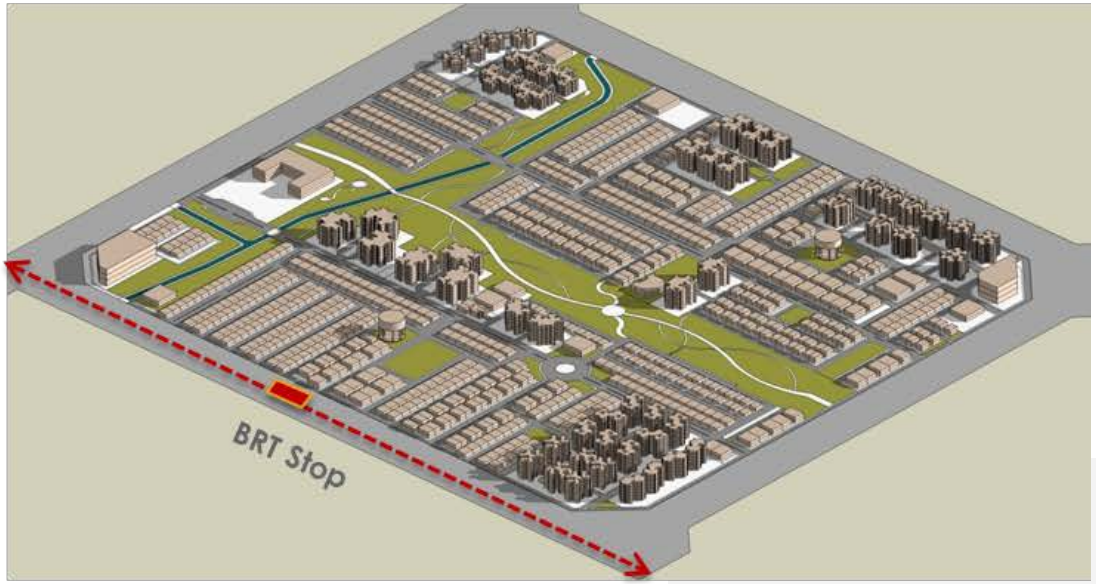
Transit Oriented Development



Original Design

Proposed Design

Next Generation Sustainable Transport

Sound Public Transport

Next Generation Sustainable Transport

Car Restriction & Pricing

Next Generation Sustainable Transport

Shared Mobility

Next Generation Sustainable Transport

Intermodal Connectivity

Project: Paya Lebar
Project Lead: Urban Redevelopment Authority of Singapore (URA)
Location: Paya Lebar, Singapore
Image Credit: William Cho

Next Generation Sustainable Transport

Low Carbon Transport

- The 6 complimentary trend agenda set to achieve the accessibility, safety and universal access goals also serve the climate change mitigation goals.
- The trends align perfectly ASI framework adopted by SLoCaT partnership in 2012
- Private motorisation is a key driver for urban sprawl, avoiding sprawling and limiting additional area for accommodating urban populations is the biggest climate change mitigation opportunity.
- Sustainable transport also being low carbon transport.

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Resilient Transport

- Principles to be adhered to increase resilience and reduce vulnerability of the transport networks;
  - Use of permeable materials in roads.
  - Creation of some redundant transport routes
  - Gradual replacement of road and railways materials that are permeable and suitable for heat
  - Protection, adaptation or movement of particularly vulnerable transport infrastructures like tunnels, bridges, metro entrances etc

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International Agenda

- The international community needs to support the following three things to achieve the vision for sustainable transport set out in the urban SDG
  - Stronger Advocacy
  - Quantification of Co-Benefits
  - Climate Finance

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National Agenda

- Many countries already have national programs on urban transport and urban development
- These to be modified to drive sustainable transport agenda building of the six complimentary trends
- Effective implementation by:
  - Alternative analysis
  - Ensure deliverability
  - Facilitate local buy-in

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Thank You …

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