URBAN TRANSPORT IN DEVELOPING COUNTRIES
Balancing Accessibility with Aspiration

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South Asia, Southeast Asia, and Sub-Saharan African to urbanize most rapidly by 2030.

(N=769 cities)

Source: Oxford Economics data, analyzed in V. A. Beard, A. Mahendra, M.I. Westphal, 2016 (forthcoming WRI publication). Draft not to be used without permission.
INVERSE RELATIONSHIP BETWEEN URBAN POPULATION GROWTH AND ECONOMIC GROWTH IN SUB-SAHARAN AFRICA AND SOUTH ASIA

Paved roads occupy a smaller share of urban land in Africa than elsewhere—and usually drop off abruptly beyond the city center.

Source: Oxford Economics, World Bank country classification; analyzed in V. A. Beard, A. Mahendra, M.I. Westphal, 2016 (forthcoming WRI publication). Draft not to be used without permission; source for Africa information: Lall, S., World Bank.
Global Stock of Motorized Vehicles

- 250 million in 1970
- 1 billion in 2010
- 2 billion in 2030
- 3 or 4 billion? in 2050

ASIA TO HAVE ABOUT HALF OF GLOBAL VEHICLES BY 2030, SAYS ADB

Source: Fabian, B. (2012)
URBAN EXPANSION CREATES CHALLENGES FOR TRANSPORT ACCESSIBILITY

On average, **4-fold to 6-fold increase in urban land cover expected** between 2000 and 2050, in developing countries.

Sources: IIHS (2011) for Bangalore and Solly Angel, New York University (2016) for Accra
BUSINESS AS USUAL URBAN TRANSPORT SCENARIO

- 40-50% of fatal crashes happen in urban areas
- 50% of traffic deaths are pedestrians and vulnerable users, including the poor
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- 10% of GDP
- Contributed to more than

- 1.24m Traffic fatalities every year
- Transport GHG emissions increase by 80% by 2050

- 2.1m premature deaths from air pollution every year

Data source:
LIMITED AVAILABILITY OF RELIABLE, HIGH QUALITY TRANSPORT LIMITS ACCESS AND PRODUCTIVITY

In Nairobi, 70% walk or take the matatu to work limiting access to opportunity

- 28% matatu
- 42% walk

...limiting access to opportunities

Source: World Bank and JICA Personal Travel Survey (2013); credit: S.Lall
OVERLAPPING DIMENSIONS OF ACCESSIBILITY

- **Proximity**, how far is the nearest transport service?

- **Affordability** of the transport services?

- **Reliability**, will the service be available when the user needs it?

- **Quality**, is the service safe, comfortable?

- **Quantity**, how frequent is the service and does the capacity match demand?
URBAN TRANSPORT OPTIONS BY INCOME CLASS

- ** Poor **
  - Walk/bicycle, limited access to public transport, long commutes, high costs

- ** Middle class **
  - Walk/bicycle, use of public and informal transport, some use of two-wheelers
  - Lower middle
  - Upper middle

- ** Rich **
  - Declining use of public and informal transport, increasing use of two-wheelers and private cars
  - Use of private cars

Source: Adapted from CODATU and AFD (2014) by Mahendra, A. Draft not to be used without permission.
ROOT CHALLENGES IN DEVELOPING COUNTRIES

• Rapid, unmanaged motorization and declining non-motorized accessibility

• Lack of integrated planning:
  o across transport modes (public, private, informal, non-motorized, and freight)
  o across land use, transport, and economic development sectors → leads to urban expansion, problem of last mile access and loss in productivity

• Misaligned sectoral plans and conflicting government policies at national and local levels

• Financing gap
NEW TRENDS ON THE RISE

TECHNOLOGY-DRIVEN TRANSPORT INNOVATIONS

BRT AND BUSWAY SYSTEMS IN THE WORLD

Global growth of bike-sharing 2000-2013

Global Growth of Car Sharing 2000-2012

Evolution of the number of cities per year

2010: Guangzhou, Hefei, Yancheng, Zaozhuang – China; Jaipur - India; Bangkok - Thailand; East London Transit – UK; Barranquilla, Bucaramanga – Colombia; Ecatepec-Mexico; Brampton – Canada; ...

1972/2010*: Lima

1974/1991*: Curitiba

2000; Bogotá (TransMilenio), Colombia
VEHICLE DEMAND MANAGEMENT SCHEMES EXPANDING

BUS RAPID TRANSIT WITH TRANSIT ORIENTED DEVELOPMENT

Source: WRI India
GURGAON RECLAIMS ITS STREETS
RIDESHARING: UBER, LYFT, SIDE CAR…

Bhubaneshwar, Coimbatore: Your uberAUTO Is Arriving Now
EFFORTS TO INTEGRATE INFORMAL TRANSPORT

Fare setting and regulation for 50,000 autorickshaws in Chennai, India -- 2013

Digital matatus project – mapping of matatu routes in Nairobi, Kenya -- 2014

Sources: www.digitalmatatus.com, WRI India
STRATEGY FOR CHANGE – FOUR SETS OF ACTIONS TO IMPROVE URBAN ACCESS

• Enhance accessibility for all by investing in public, shared and non-motorized transport; manage vehicle use and ownership

• Establish national government policy and incentives for integrating urban transport planning across modes, and across land development, economic development, and environmental plans

• Tap into national, international, and new land-based sources of financing and limit dependence on subsidies for operations

• Enhance performance and governance of the urban transport system using technology; integrate technology driven innovations with appropriate regulation
THANK YOU!

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