CLIMATE & TRANSPORT

CLAYTON LANE, CEO
Institute for Transportation & Development Policy (ITDP)
Twitter: @ClaytonHLane
clayton.lane@itdp.org
IMPACTS & PROGRESS
CLIMATE & TRANSPORT
Houston

6th 1,000-year U.S. flood... in two years
Estimated Loss:
- 70 lives
- 500,000 cars
- $170 billion assets
1. High-Carbon, Low-Resilience
   - Car dependence → GHGs
   - Oil & gas industry → GHGs
   - Sprawl → Impermeable surface

2. Climate Change
   - Warmer Gulf of Mexico
   - Larger, wetter, more frequent storms

3. Catastrophic Flooding
   Transport, land & life:
   - 70 lives lost
   - $170 billion damage
   - 500,000 cars lost
   - Infrastructure impassable
GHG MITIGATION POTENTIAL?
CLIMATE & TRANSPORT
Urgency: Rapid Transit

Goal: **23%** VKT reduction to limit global warming to 2C.

![Graph showing road travel in billion veh-km from 2000 to 2050 for 4 Degree and 2 DegreeScenario. The graph indicates a trend of increasing road travel, with a significant increase from 2030 onwards for the 4 Degree Scenario. The 2 Degree Scenario shows a more gradual increase. The graph also highlights that the 4 Degree Scenario requires an additional 20,000 km of rapid transit to meet the reduction goal.]
Co-benefits of 23% Less VKT


Source: Duduta and Hidalgo (2013)
We could avoid

\[ \sim 3.8 \text{ gigatons} \]

of global CO\textsubscript{2} emissions,

an 83% reduction in urban transport emissions over BAU

And save cities

\[ \$130 \text{ trillion} \]

over the next 35 years
Delayed impact of electrification

Stock lags behind sales

Optimistic Scenario:
By 2050, ICEs comprise 0% of sales, yet…
25% of stock!!
Technology will not solve all problems

- Climate
- Energy Access
- Urban Sprawl
  - Infrastructure Cost
  - Energy
  - Social Inequity
- Public Health
  - Traffic Fatalities
  - Physical Inactivity
- Congestion
Need holistic approach

- Public Transport
- Clean fuel & vehicles
- Fair User Fees
- Compact, Connected Growth
- Urban street design
- Sharing
- Cycling
- Walking
- Urban street design
FROM HERE…
HOW DO WE GET THE FUTURE WE WANT?

CHANGE

HOW WE THINK
You can’t cure obesity with bigger pants
How most traffic engineers see your city
How cities should be designed
Turn the pyramid upside down!

Prioritize walking, cycling, and public transport

• Accessibility
• Equity
• Public health
• Environment
MAJOR CAPACITY GAPS
Vehicles Over People
Indonesia’s Ambitious 2020 Plan: 29 cities with BRT

29 Indonesian Cities Planned for BRT

- Not-built
- BRT-Lite
- Full BRT (Transjakarta)
Indonesia “BRTs” built
PROGRESS
Yichang, China

**Integrated approach**
- Complete Streets
- Bike sharing
- TOD
- Local bus
- BRT
- Parking → public space
Yichang, China

Before → After

Before → After
India: Smart Cities for People

Chennai, Coimbatore:
• 80% complete streets policy
• Chennai BRT in planning
• Parking regulation

Pune:
• 100km of complete streets
• BRT 30km, >100km planned

Maharashtra State:
• People-Urban Transport Policy
• Urban Habitat Policy (TOD)

National:
• Indian Roads Congress: BRT, complete streets guidelines
KEY MESSAGES
Key Messages

1. **Climate is about people.** Put people at center of solutions.
2. **Holistic**, integrated interventions are necessary.
3. **Mitigation potential** is significant, urgent.
4. **Progress is possible!** There is much, much more to do.