Mobility: present trends and practices and future solutions

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PRESENTATION STRUCTURE

1. Mobility Issues
2. International and National Policy Perspective
3. Role of education and schools
4. Present Trends in the 8 selected states of India
5. Possible steps towards future solutions
MOBILITY ISSUES
India ranks **155th out of 178 countries** in its efforts to address environmental challenges, according to the 2014 Environmental Performance Index (EPI)

India performs the worst among other emerging economies
Liveability Index

Four pillars of comprehensive development:

1. Institutional
   - Governance index

2. Social
   - Identity and Culture Index
   - Education Index
   - Health Index
   - Safety and Security Index

3. Economic
   - Economic Index
   - Housing and Inclusiveness Index
   - Open Space Index
   - Mixed Use and Compactness Index
   - Energy Index
   - Mobility Index
   - Water Index
   - Waste Water Index
   - Solid Waste Index
   - Pollution Index

CITY LIVEABILITY INDEX
Impacts of Mobility Choice on Liveability

- Housing and Inclusiveness Index
- Open Space Index
- Mixed Use and Compactness Index
- Energy Index
- Mobility Index
- Water Index
- Waste Water Index
- Solid Waste Index
Future of our children, if we do not take actions now

Source: Air Pollution and Child Health: Prescribing Clean Air, 2018
Health Impacts of Air Pollution
- Adverse Birth Outcomes
- Infant mortality
- Neurodevelopment
- Childhood obesity
- Lung function
- ALRI, including pneumonia
- Asthma
- Otitis media
- Childhood cancers

“Lifting lifelong burdens: Exposure to air pollution can alter children’s trajectory through life, pushing them onto a path of suffering, illness and challenge. But this is preventable.”

Source: Air Pollution and Child Health: Prescribing Clean Air, 2018
International shift towards sustainable city planning
International shift towards sustainable city planning
Principles for Transport in Urban Life: Better Together

Successful sustainable cities in the twenty-first century will prioritize people by integrating transport and urban development. Making this happen means putting the Our Cities Ourselves principles into practice to create vibrant, low-carbon cities where people want to live and work.

The Our Cities Ourselves principles show how the future of transport in urban life lies in reinforcing the complementary nature of sustainable urban transport and urban development. In the face of rapid urbanization and climate change, the future of transport in urban life will depend not only on these principles, but how they work together.

Compact
In a compact city, activities are located closer to one another, requiring less time and energy to connect. When all the principles are applied collectively, a thriving compact city is created.

Densify
By building up instead of out, cities absorb urban growth in a more compact way. Density supports a lively mix of activities and better transport services, but also requires that the transport systems can handle the increase in people.

Transit
Public transit connects and integrates more distant parts of the city. Transit corridors are the natural places where densification should begin. High quality transit is critical to create a prosperous and equitable city that is easily accessible by all.

Connect
A city needs a tight network of streets and paths for pedestrians and cyclists as well as public transit. Creating highly permeable places allows for a variety of mobility options that make trips more direct.

Mix
A connected city becomes more animated when there is a mix of activities along the streets and paths. Different uses encourage shorter trips and more lively neighborhoods.

Cycle
Like mixed uses, cycling activates streets and provides people with an efficient and convenient way to travel for medium distances. Cycling increases a person's access to a larger area, as well as increases the coverage of transit.

Shift
With the above principles in place, getting people out of their cars becomes easier but is not enough. Pricing and traffic reduction tools encourage people to shift away from cars.

Walk
When all the principles come together, the results are most keenly felt by the pedestrians. Vibrant, active streets where people feel safe are fundamental to the successful twenty-first century city.

Source: ITDP
Approach to Sustainable Mobility

20-Minute Towns & a 45-Minute City
Commuters will have more public, active and shared modes of transport to choose from to facilitate more convenient, connected and faster journeys.

- Target 1: 20-Minute Towns
  - All journeys to the nearest neighborhood center using public, active and shared modes of transport are completed in less than 20 minutes.

- Target 2: 45-Minute City
  - 9 in 10 peak-period journeys using public, active and shared modes of transport are completed in less than 45 minutes. This will help the average peak-period commuter to save about 10 minutes every weekday.

- Target 3: Public, active and shared modes of transport are the preferred way to travel, accounting for 9 in 10 of all peak-period journeys.

Transport for All
Commuters desire a more inclusive and welcoming transport system for families, elderly and persons with disabilities (PWOs).
- Nurturing a gracious and caring commuting culture
- Developing the capabilities of public transport workers to meet diverse needs
- Providing infrastructure for better accessibility and barrier-free travel

Healthy Lives, Safer Journeys
Commuters can look forward to journeys that promote healthier lifestyles and create a more liveable Singapore.
- Providing more spaces for public transport, active mobility and community uses
- Working towards a future with fewer land transport-related fatalities
- Creating environmentally-friendly vehicles and infrastructure

Source: Singapore Land Transport Master Plan
Provisions for Sustainable Mobility

**walk**

High quality, unobstructed pedestrian footpaths provide basic mobility for all. Furniture, landscaping elements, and active building edges transform walkways into vibrant public spaces.

- Leave at least 2 m of clear space to ensure that footpaths are accessible to all.

**cycle**

Street design ensures safety for cyclists by reducing carriageway speeds or creating separate cycle tracks. A complete network, adequate shading elements, smooth surfaces, and secure cycle parking are essential.

- Provide street trees and covered walkways to make walking pleasant even during hot months. Ensure that lighting is present to increase safety at night.
- Encourage active and visually permeable frontage—rather than blank compound walls—to improve safety.
- Use speed table crossings to reduce motor vehicle speeds.
- Create continuous, physically segregated cycle tracks when motor vehicle speeds are higher than 30 km/h.
Create a dense network of rapid transit lines to ensure that the majority of the population has access to high quality public transport. Frequent, fast, and reliable high capacity rapid transit reduces dependence on personal motor vehicles.
CHILDREN in the urban vision of India
(Assessing the current urban missions of India on their responsiveness to the needs of children)

- Swachh Bharat Mission
- Pradhan Mantri Awas Yojana
- National Urban Livelihood Mission
- ATAL Mission for Urban Rejuvenation and Transformation
- Smart Cities Mission
Need for educating children about impacts of air pollution

- Kids are the future
- Kids can be the ambassadors of change
- Parent’s are most concerned about kids
- Schools lay the foundation of good habits.
Schools can act as the epicenter of sensitization programs

Ways for sensitizing kids:

- Conducting exhibitions
- Conducting campaigns
- Organizing trips on public transport and cycling
PRES ENT TREND S IN THE ELECHTED STATES OF INDIA
Case of Bhubaneshwar- Odisha

Bhubaneswar City Master Plan encouraged private vehicle use

Had been trying to introduce BRT for a decade.

Smart City Scheme provided opportunity to prioritize sustainable urban development
Case of Bhubaneshwar - Odisha

Planning for Transit Oriented Development

Planning for Complete streets

Urban Renewal

Bicycle Sharing Scheme
Case of Chennai - Tamil Nadu

Chennai is:

- Improving Public Transport
- Improving streets with better pedestrian facilities
Case of Kochi - Kerala

Organised Public Transport

Organised Water Transport
Case of Kochi - Kerala

Comprehensive Street improvements with priority to Non Motorised Transport

Public Bicycle Sharing Scheme
Bengaluru footpaths are being upgraded with better facilities.
STEPS TOWARDS INABILITY THROUGH SCHOOLS AND EDUCATION
Schools can conduct awareness programs with kids and parents
Schools can include cycling as sports
Schools can provide space for bicycle and bus parking
Schools can demand traffic calming in and around...