Seminar on Air Pollution
CSE- Green Schools Program

Mobility: present trends and practices and future solutions

PRES ENTER

ADARSHA KAPOOR

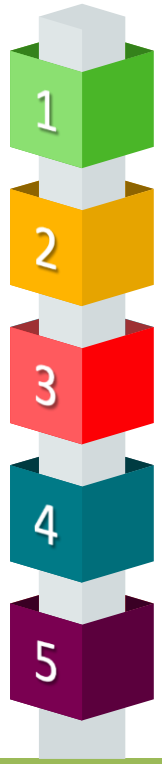
Email id: adarsha47@hotmail.com,
Ph.9818313591

Urban Designer Creative Footprints
www.creativefootprints.co.in

Coordinator, RegenLab
Trust for Regeneration of Indian Settlements

21st August 2019

PRESENTATION STRUCTURE



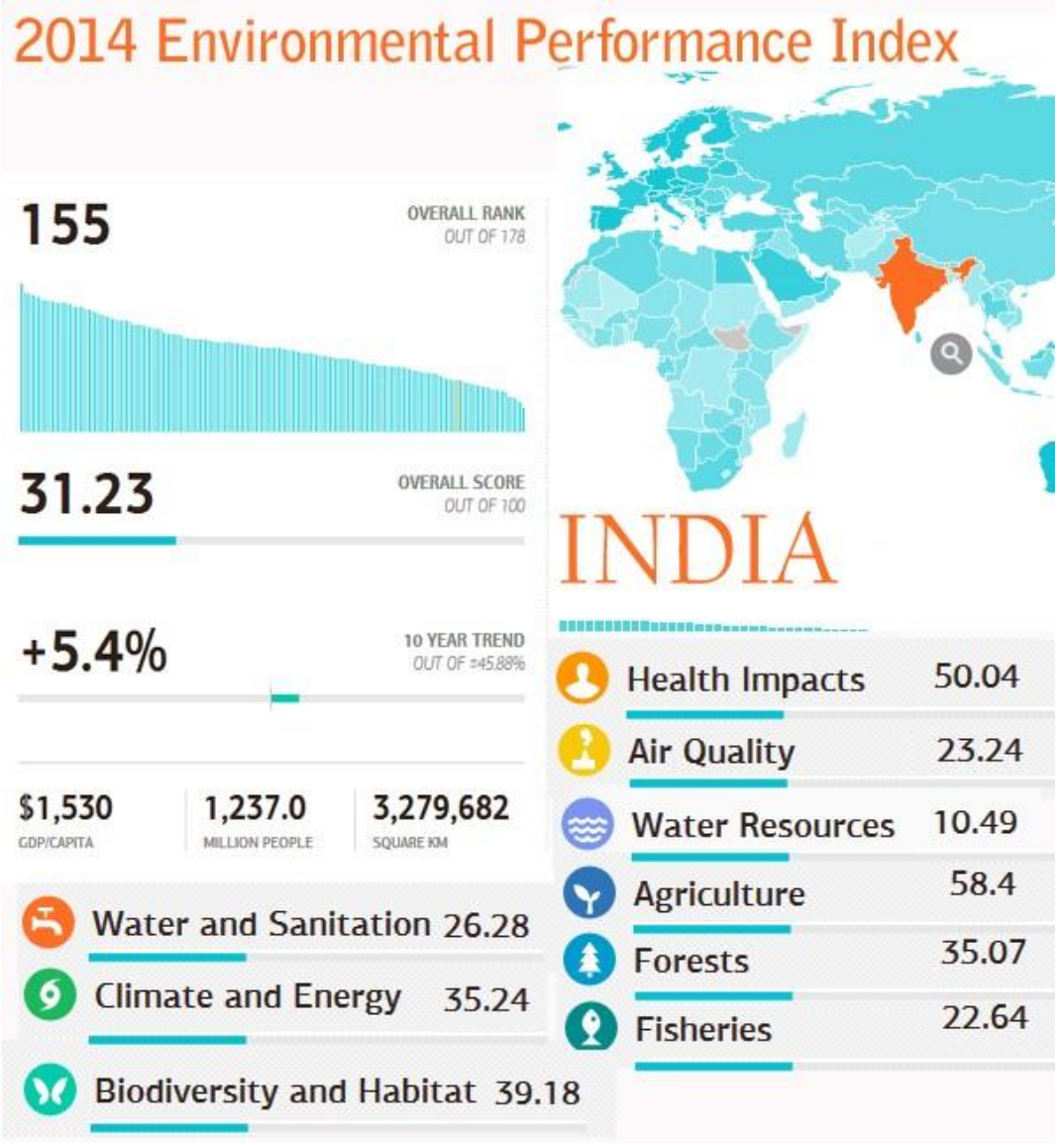
1. **Mobility Issues**
2. **International and National Policy Perspective**
3. **Role of education and schools**
4. **Present Trends in the 8 selected states of India**
5. **Possible steps towards future solutions**

MOBILITY ISSUES

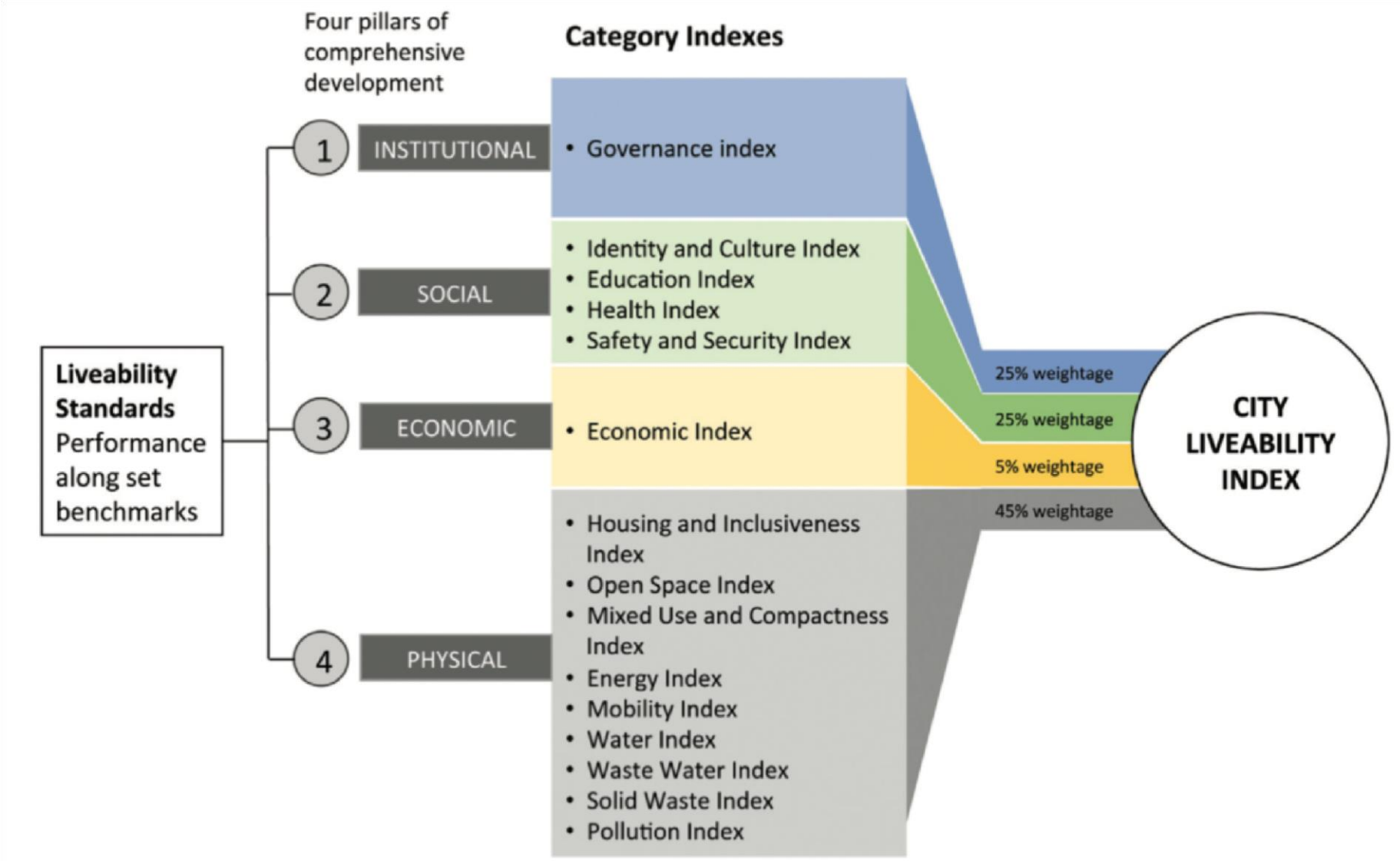
Context for changing planning techniques

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

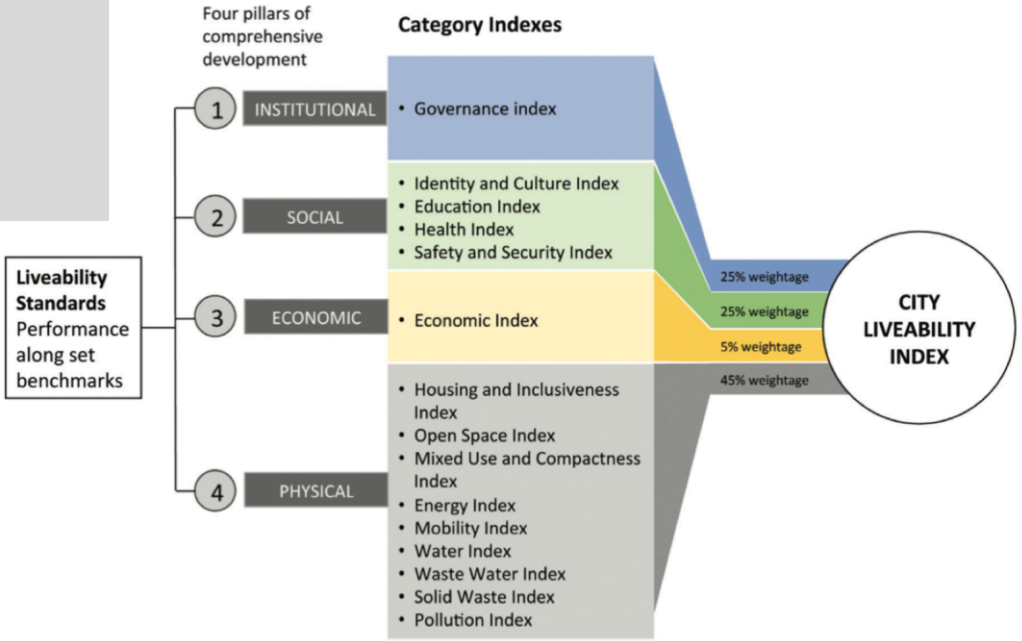


Liveability Index

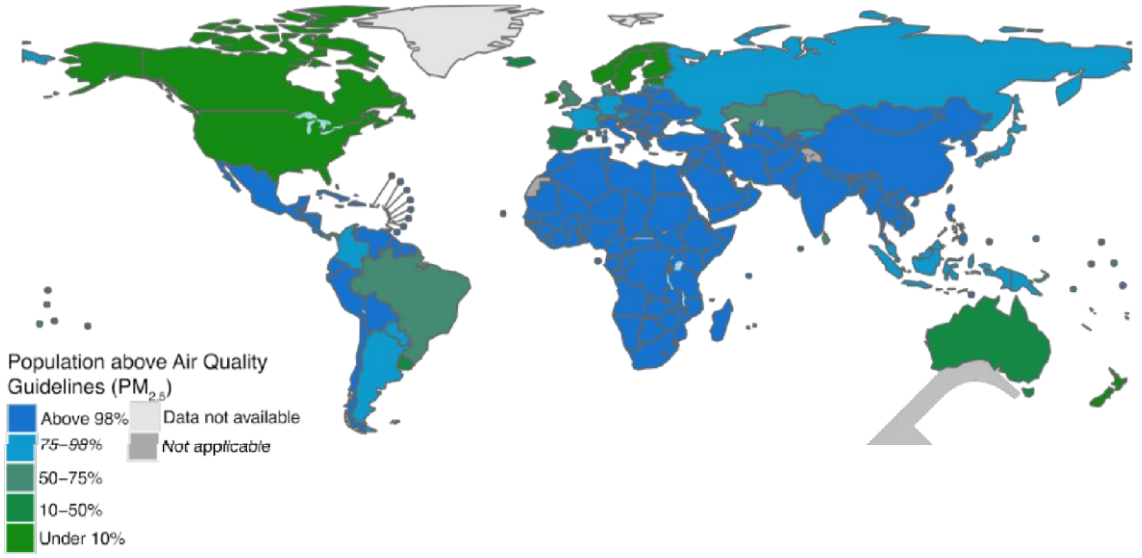


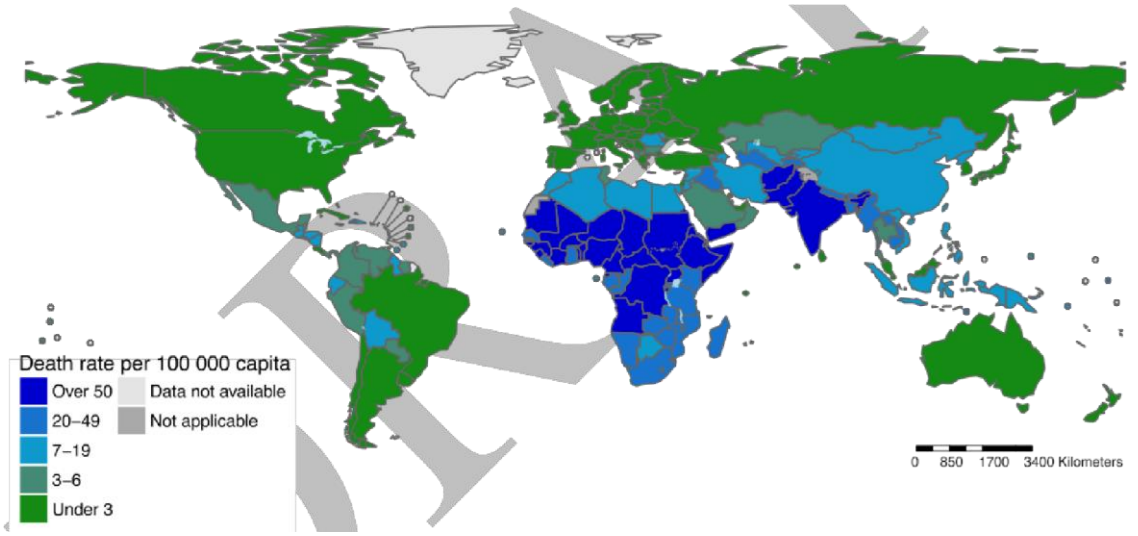
Impacts of Mobility Choice on Liveability

- 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



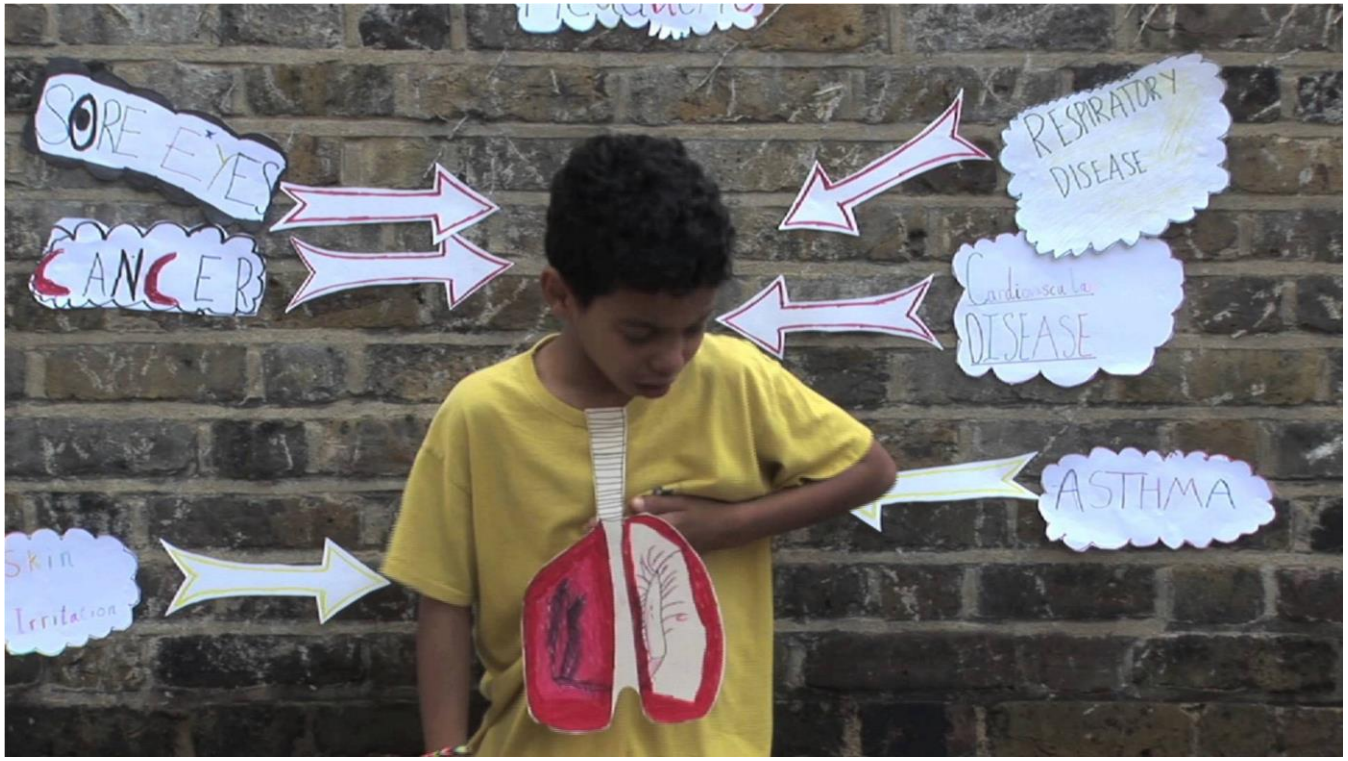


Source: Air Pollution and Child Health: Prescribing Clean Air, 2018

Impacts on Child's health

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

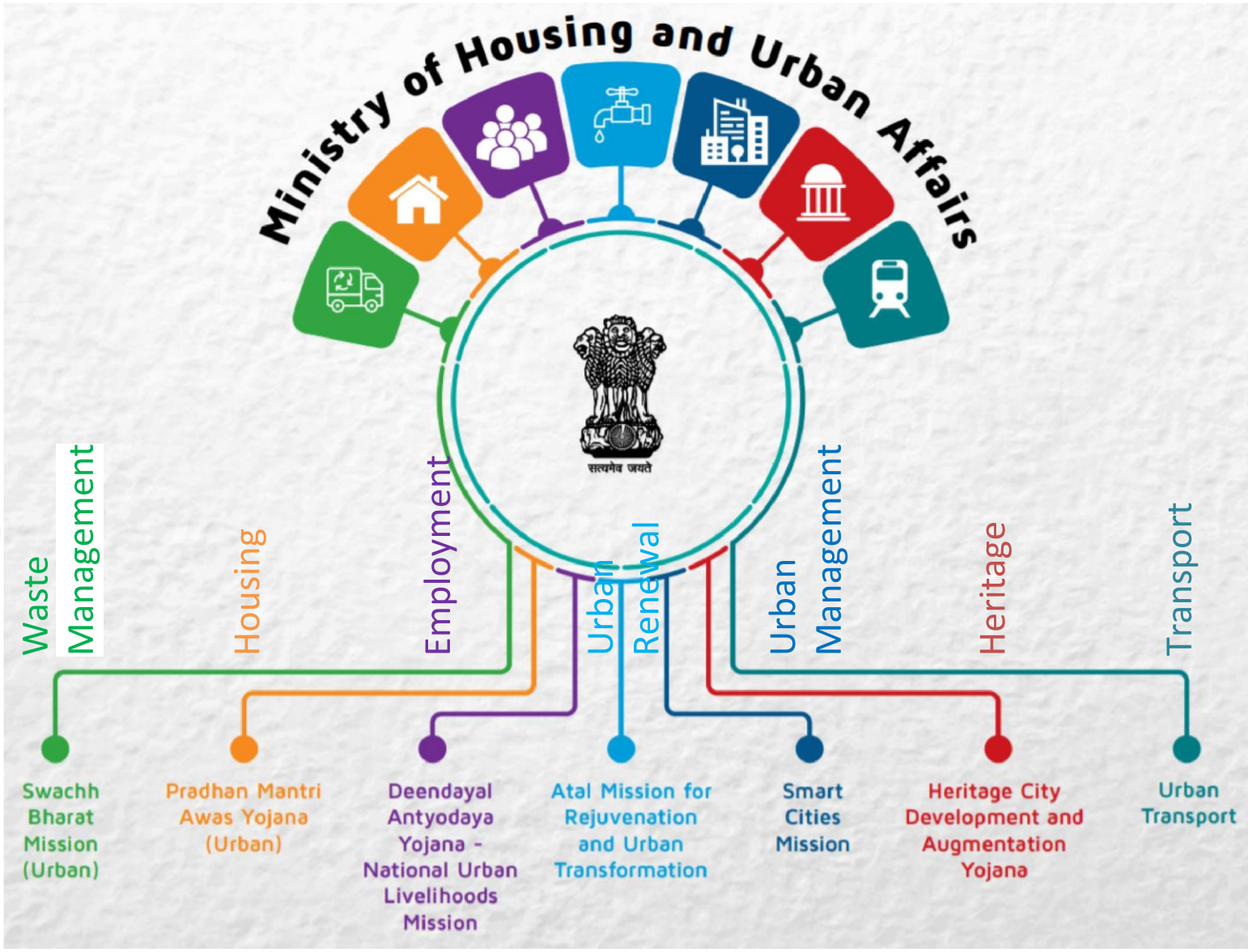
INTERNATIONAL AND NATIONAL POLICY PERSPECTIVE

International shift towards sustainable city planning

International shift towards sustainable city planning

National Policy perspective

Sustainable



Approach to Sustainable Mobility

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.

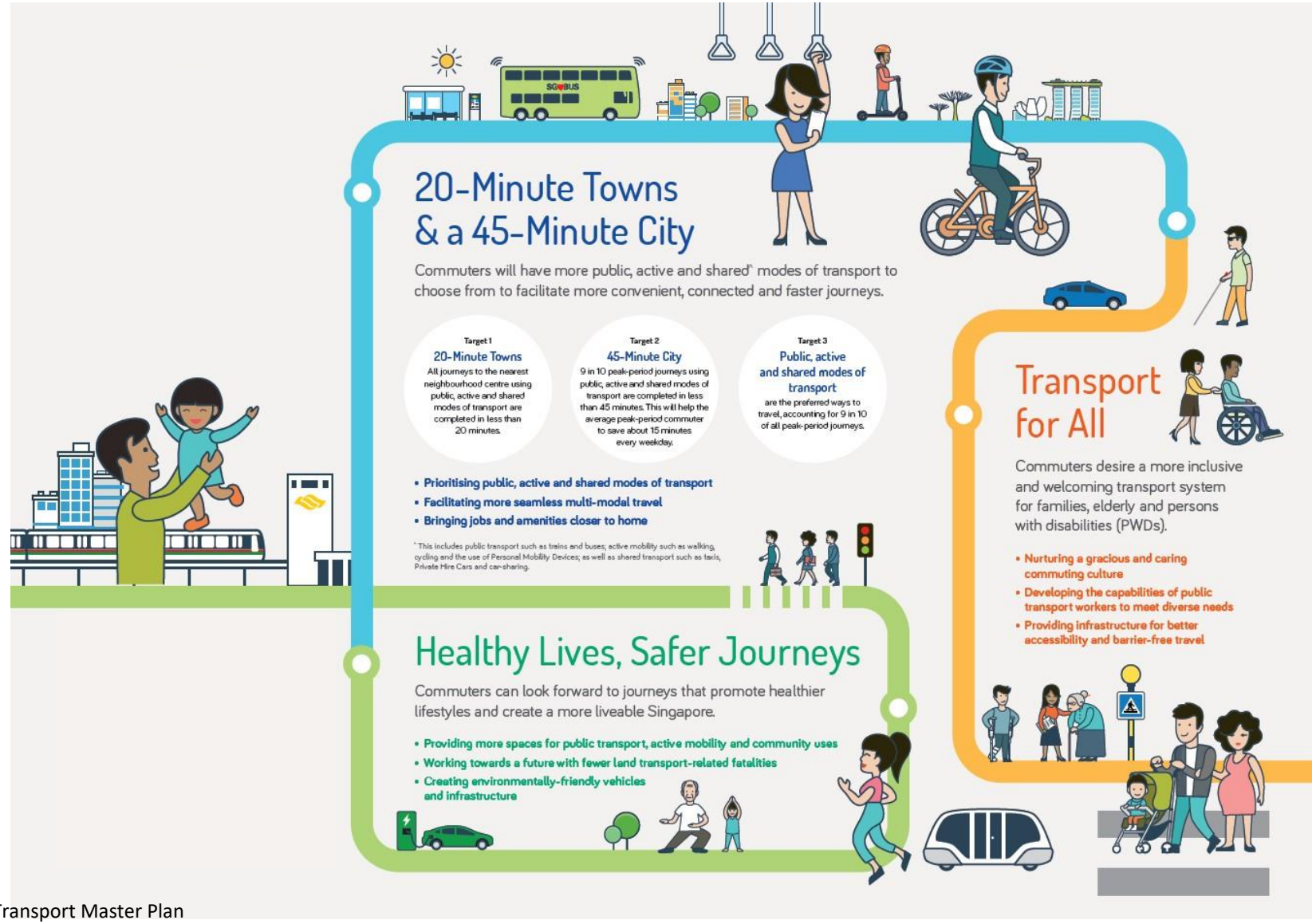
Cycle
Like mixed uses, cycling activates streets and provides people with an efficient and convenient way to travel for medium distances. Cycling increases a person's access to a larger area, as well as increases the coverage of transit.

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 pedestrian. Vibrant, active streets where people feel safe are fundamental to the successful twenty-first century city.

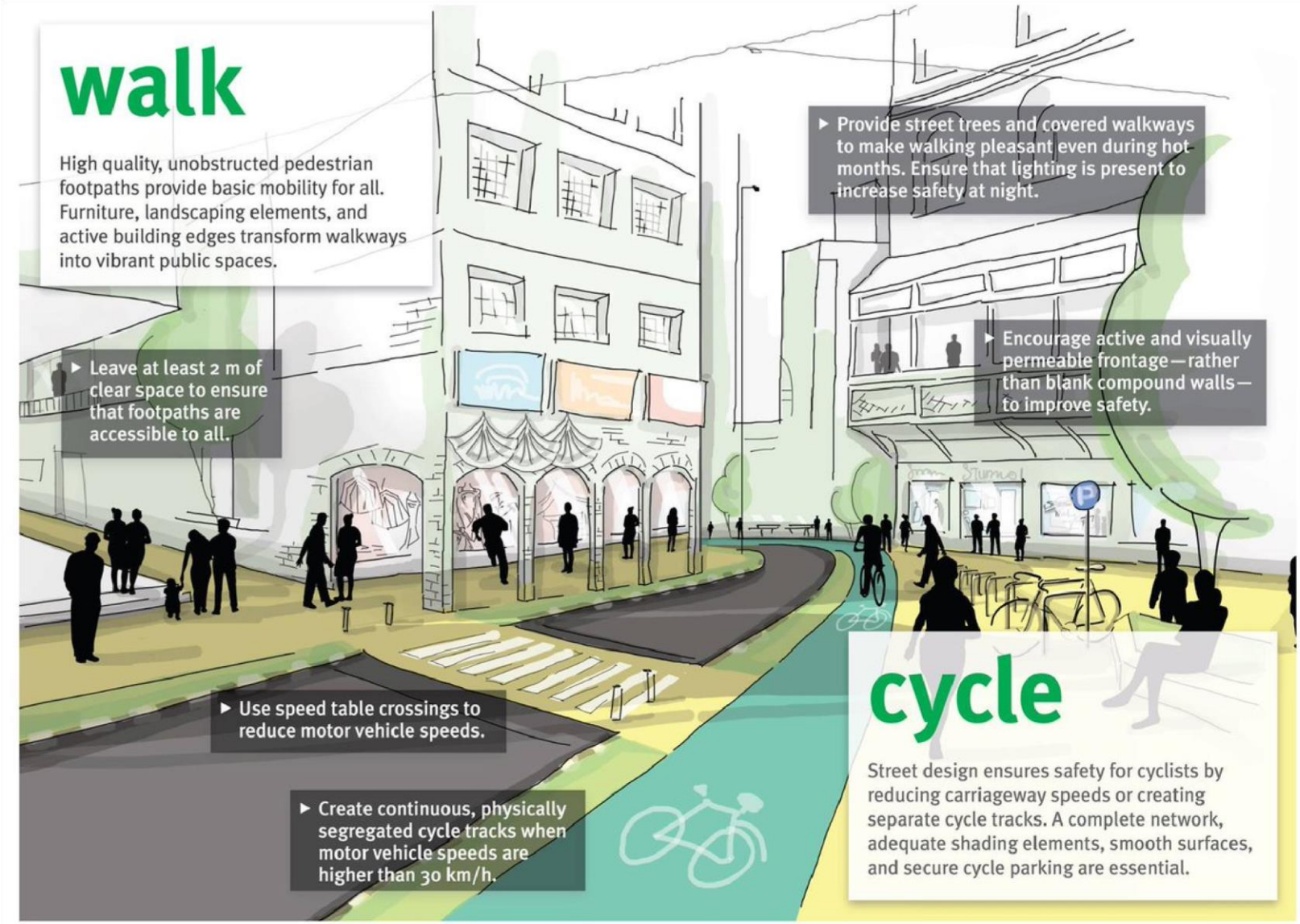
Source: ITDP

Approach to Sustainable Mobility



Source: Singapore Land Transport Master Plan

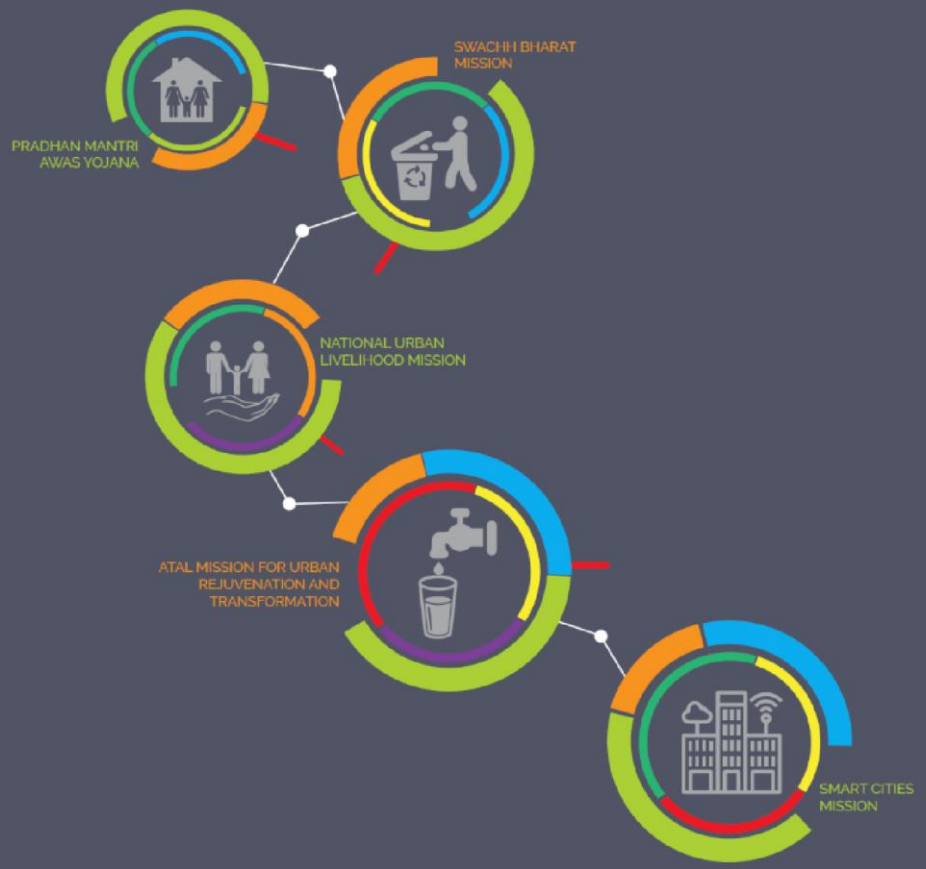
Provisions for Sustainable Mobility



Provisions for Sustainable Mobility

CHILDREN in the urban vision of India

(Assessing the current urban missions of India on their responsiveness to the needs of children)



Child Friendly Smart City Initiative

ROLE OF EDUCATION AND SCHOOLS

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 TH E 8 S ELEC TED STATES O F IND IA

Case of Bhubaneshwar- Odisha

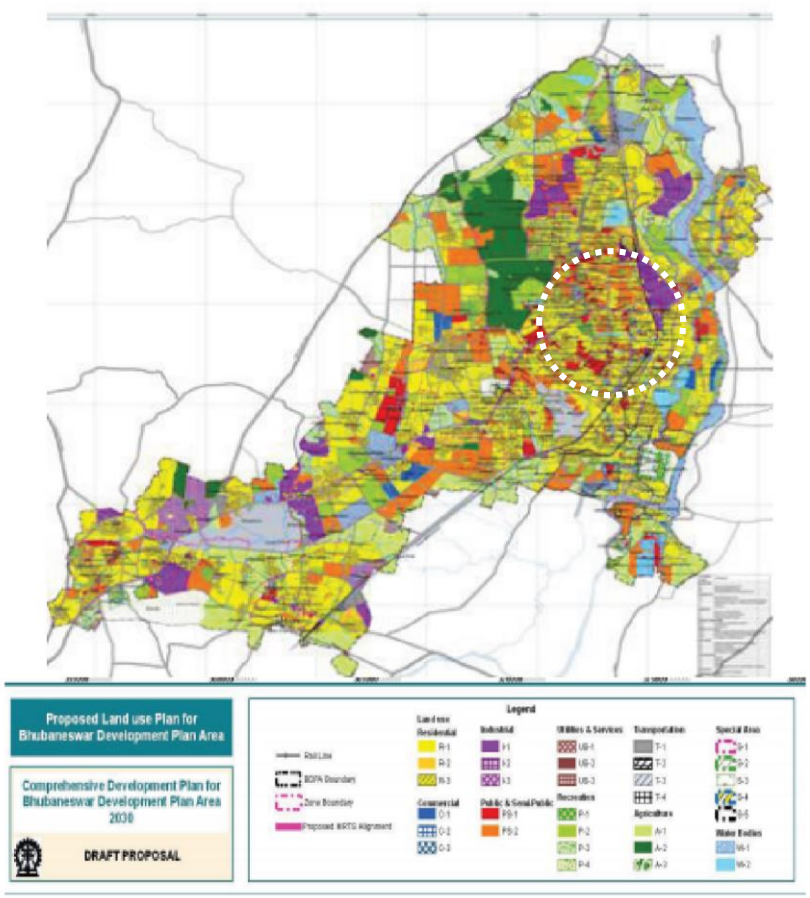
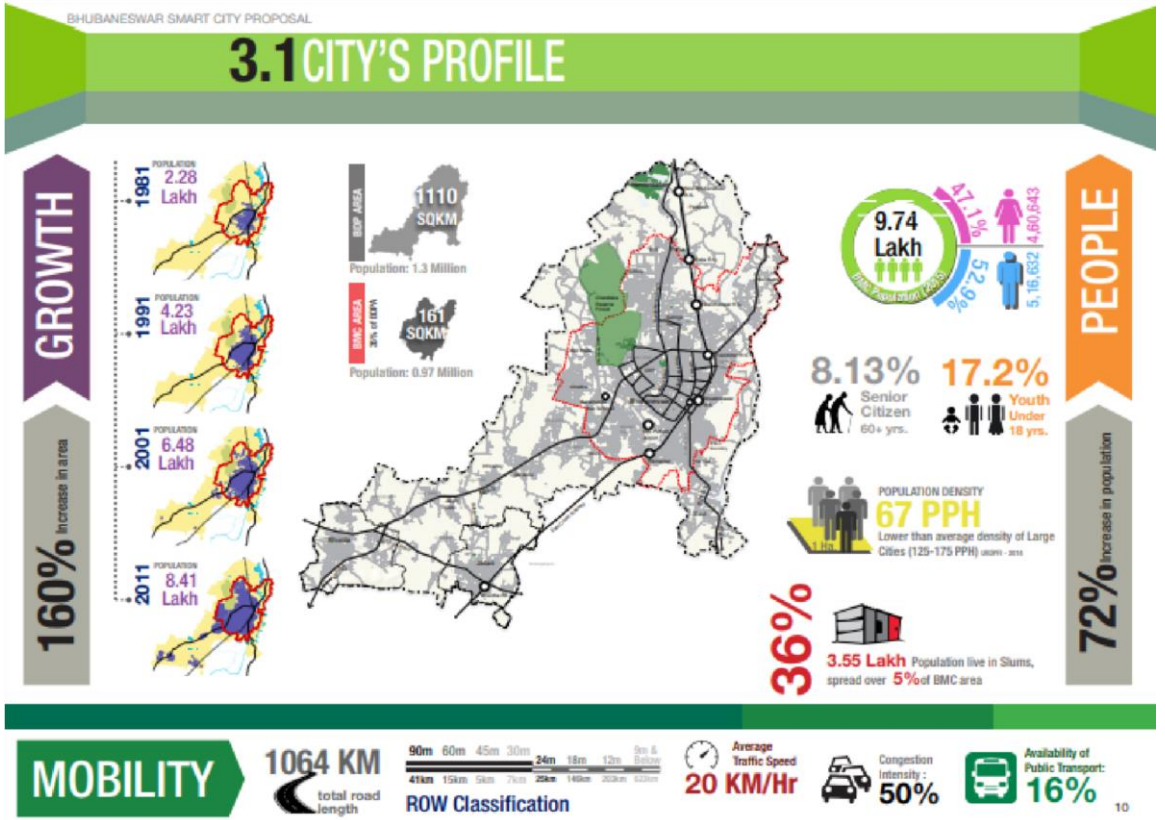


Figure 4.7 Comprehensive Development Plan- 2010 for BDPA
Source: Draft CDP for BDPA-2030 (2008)



Bhubaneswar City Master Plan encouraged private vehicle use

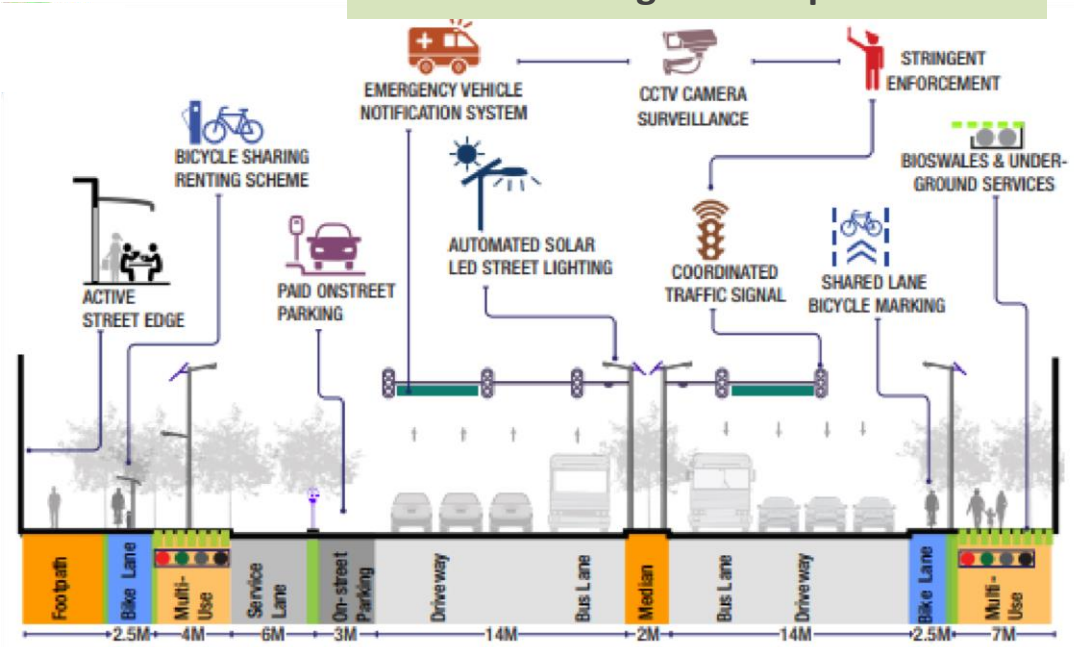
Had been trying to introduce BRT for a decade.

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

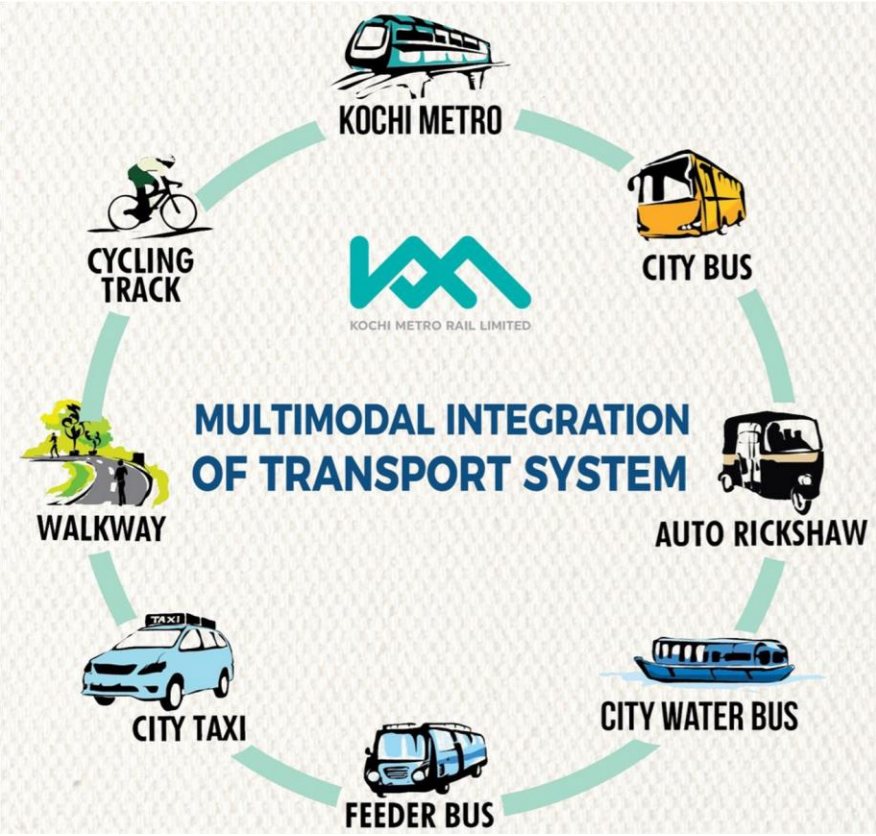
Bicycle Sharing Scheme

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

Case of Bengaluru- Karnataka

Bengaluru footpaths are being upgraded with better facilities.

STEPS TOWARDS SUSTAINABLE MOBILITY 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