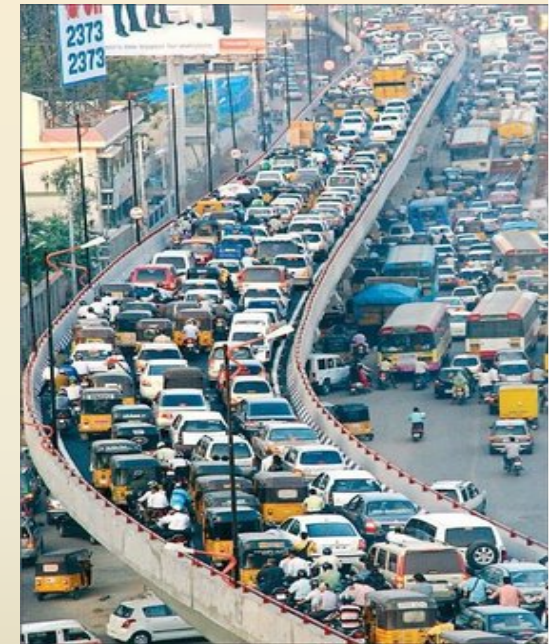


DEVELOPMENT OF URBAN PUBLIC TRANSPORT INFRASTRUCTURE AND SERVICES IN INDIA- Initiatives, Challenges and Potentials for International Cooperation



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INDIA - URBAN TRANSPORTATION SCENE

- ❖ 2nd Largest urban system
- ❖ 60% GDP generated from urban areas

- ❖ 5161 towns and cities
 - 7 megacities (4 million + population)
 - 28 cities with population 1-4 million
 - 13 cities in 0.8 to 1.0 million range, will cross 1 million by next census
 - 40 cities in 0.5 to 1 million population range and balance state capitals

- ❖ Motorization rates are high
- ❖ In 6 Metro Cities, during 1981 to 2001
 - Population increased by 2 times
 - Motor vehicles increased by 8 times
- ❖ In 2006 organised city bus service - in only 20 cities

The Demand

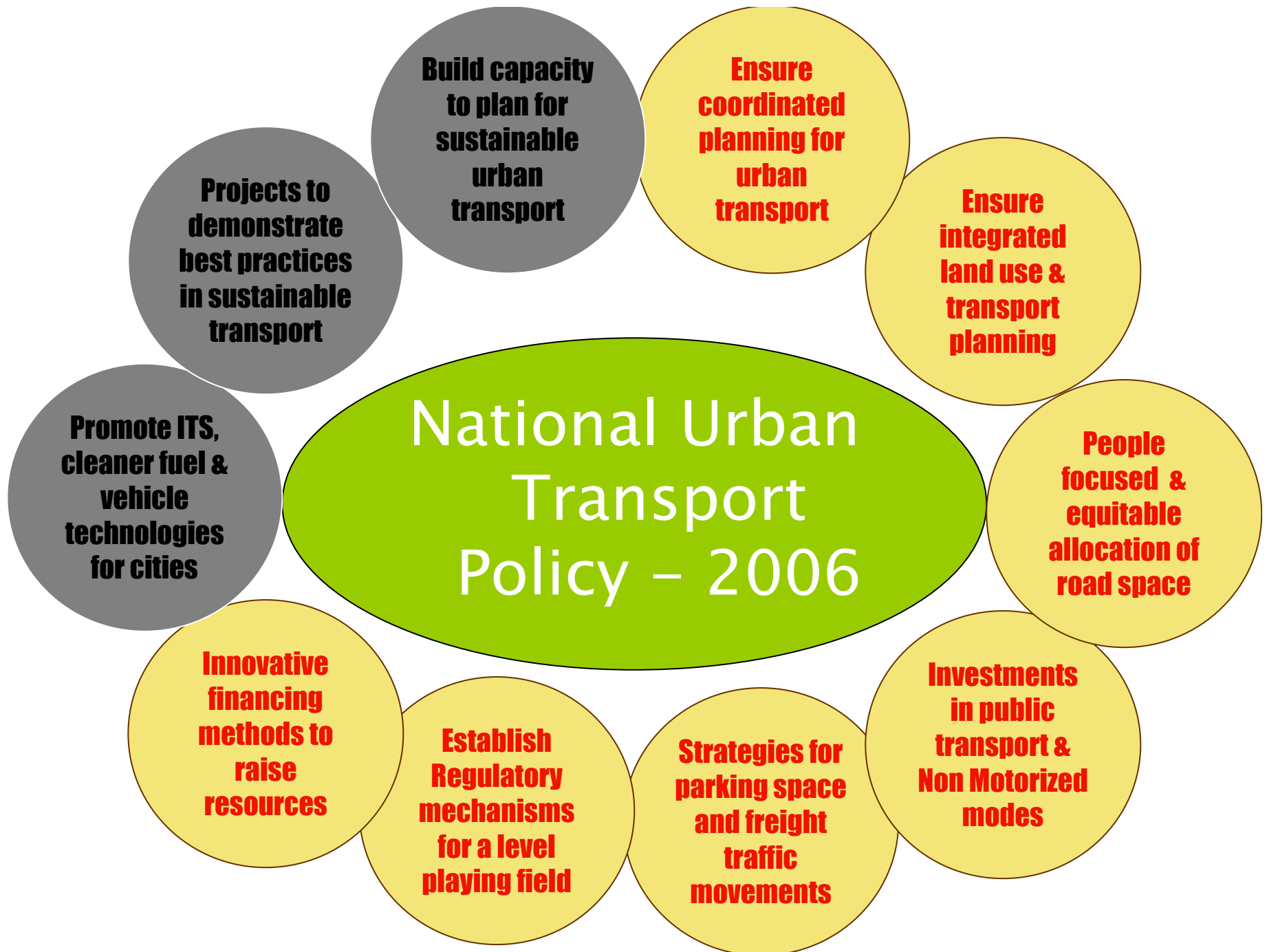
- ❖ In order to improve the Urban Transport Infrastructure and provide the gaps, the investment requirement is estimated as USD 30 billion in the 11th five year plan and about USD 97 billion over next 20 years.

Breakup of the Investments in the 11th Five year plan (2007-12)

Items	Investment required in million USD
Capacity Building and urban transport planning	77
0.1-0.5 million cities	1645
0.5-1.0 million cities	1733
1.0-4.0 million cities	5787
4.0 million plus cities	4667
MRT for mega cities	7111
Modern Buses for city transport	8444
Total	About 30 billion

Ministry's Response to Urban Transport Demand

- I. Policy- National Urban Transport Policy
- II. JnNURM- Sector Reform Linked Investments – Bus, Rail and Related Infrastructure
- III. World bank – UNDP – GEF Sustainable Urban transport Project
- IV. Human Resources and Capacity Enhancement



Jawaharlal Nehru National Urban Renewal Mission (JnNURM)

<http://jnnurm.nic.in/>

- ❖ A reform based mission for Central Financial Assistance (CFA) to Urban Local Bodies
- ❖ Reforms like abolition of Rent Act, Urban Land Ceiling Act & reduction of Stamp Duty etc
- ❖ Reforms for better urban transport planning and management-made conditional to the sanction of Urban transport Projects are:
 1. Comprehensive Mobility Plan (CMP)
 2. Setting up of Unified Mass Transit Authority (UMTA).
 3. Setting up of Dedicated Urban Transport Fund at state and city level.
 4. Transit Oriented Development Policy, Parking Policy and Advertisement Policy.
 5. Setting up of city specific Special Purpose Vehicle for managing public transport.
 6. Setting up of Traffic Information and Management Control Centre etc.
 7. Use of ITS and integration of multi-modal systems
 8. Bus prioritisation at intersections, dedicated/demarcated lanes for buses
 9. Designate a nodal department for urban transport
 10. Mechanism for periodic revision of public transport fares
 11. Waive/reimburse state and local taxes on public transport
- ❖ About 22% of the projects sanctioned under JnNURM for Urban transport (NUTP compliant)



URBAN BUS TRANSPORT IS IMPORTANT AND HAS TO BE TRANSFORMED TO A LEVEL THAT IT CAN BE SOLD TO PUBLIC AS A “BRANDED PRODUCT”

AIM TO REPLICATE METRO EXPERIENCE ON THE URBAN BUSES



Bus Rapid Transit System (BRTS)

- ❖ Buses contribute as the most important mode of Public transport across all cities.
- ❖ BRTS Projects for 422 Kms sanctioned for 9 mission cities at a total cost of US \$ 1015 million (@US \$ 2.4 million per km)

▪ Pune	101.77 km
▪ Pimpri Chinchwad	42.22 km
▪ Indore	11.45 km
▪ Bhopal	21.71 km
▪ Ahmedabad	88.50 km
▪ Jaipur	39.45 km
▪ Vijaywada	15.50 km
▪ Vizag	42.80 km
▪ Rajkot	29.00 km
▪ Surat	29.90 Km

Delhi is implementing BRTS with its own funds



- * Ahmedabad is the first city under JnNURM to have successfully launched a complete BRT system.

BRTS Projects in India

Cities	Length (in km)	Cost Sanctioned In milion USD	Additional Central Assistance In milion USD	System	Segregation	Bus Stop Location	Ticketing System
Ahmadabad	88.50	218.08	76.38	Closed	Yes	Middle	Off board
Rajkot	29.00	24.44	12.22	Closed	Yes	Middle	Off board
Surat	29.90	104.22	52.11	Closed	Yes	Middle	Off board
Bhopal	21.71	52.83	26.42	Open	Yes	Middle	Off board
Indore	11.45	21.88	10.94	Partially open	yes	Middle	Off board
Pune & Pimpri Chinchwad	124.77 (23.00)	302.92 (69.36)	151.46 (34.68)	Open	Partial	Middle	Off board
Vijaywada	15.50	33.92	16.96	Open	Yes	Middle	Off board
Vizag	42.80	100.65	50.33	Closed	Yes	Middle	Off board
Jaipur	26.10	48.71	24.36	open	yes	Middle	Off board
Delhi	14.6 (implementing with own funds)			Open	Partial	Middle	Off board



Buses for City Transport

❖ Urban Bus Specifications

❖ Low floor (400mm), semi low floor (650mm) and standard buses (900mm) as against prevailing 1100mm floor height (truck chassis)

❖ ITS features

- ❖ LED sign boards,
- ❖ audio visual passenger information
- ❖ multiplexing, On board diagnostics,
- ❖ Cameras, integrated controller
- ❖ GPS, GPRS, Smart card ticketing machines



❖ Economic stimulus package

❖ Funding procurement of buses for urban transport under JnNURM.

❖ 15260 modern buses sanctioned under economic stimulus package at a cost of US \$ 1020 Million

❖ Waive state & local taxes on public transport (upto 16%)

❖ 61 mission cities Covered; about 5200 buses are on road – 28th Feb'10

❖ City buses planned for 118 more 200 thousand+ population cities

34 new cities to get organised city bus service

BMTCL FESLF DIESEL



Urban Transport-Metro Rail Projects

- ❖ Urban ministry is supporting metro rail projects also in bigger cities to serve high demand corridors
 - ❖ Delhi
 - ❖ 96 kms is under operations.
 - ❖ Another 94 kms is under construction.
 - ❖ Metro rail projects promoted under joint ownership with the concerned state governments in Delhi, Bangalore, Kolkata & Chennai
 - ❖ 20% Viability Gap Funding for Urban transport projects on PPP
 - ❖ Mumbai
 - ❖ Hyderabad

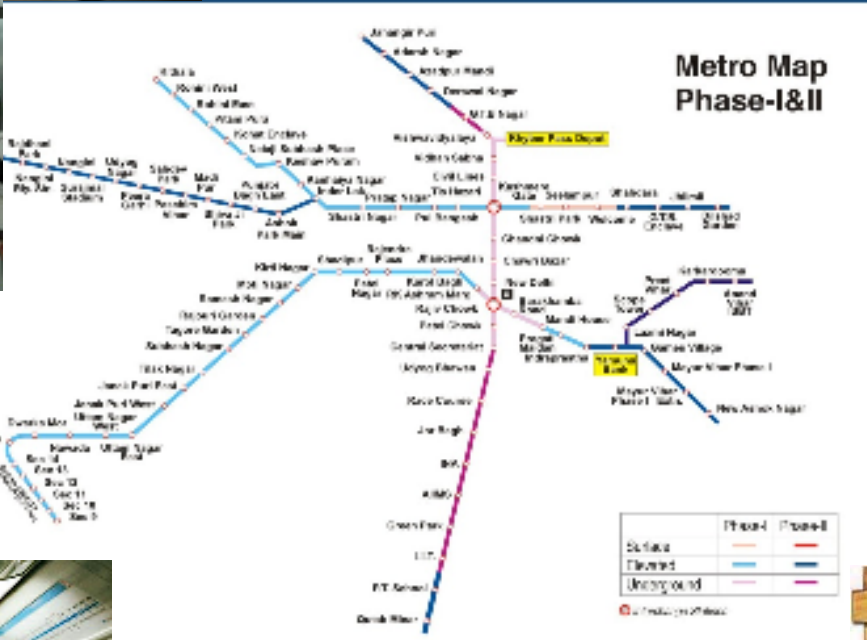
City	Kms	App. Cost (US\$ Million)
Delhi	121.26	4085
Mumbai	62.89	3915
Bangalore	42.30	1736
Kolkata	14.67	1037
Chennai	46.50	3106
Hyderabad	71.00	2638
Cochin	25.30	617

US \$ 17135 Million for about 380 kms at US \$ 45 Million/km

Finding resources to cover entire demand!



Photo © Richard Stedall



World Bank – UNDP – GEF Sustainable Urban Transport Project (SUTP)

- ❖ Unique project for taking up Demonstration projects in select cities and Capacity Building across India
 - ❖ World Bank loan, Govt of India as well as State Govt/ Urban local funding, GEF grant pooled together
 - ❖ UNDP to take up capacity development through GEF grant
 - ❖ Moving train concept – More projects and Cities can join as the project is implemented
 - ❖ Reforms in Urban transport made conditional

Other Initiatives of MoUD for Urban Transport planning & Capacity Building

To promote better practices:

- ❖ Ministry provides central Financial Assistance up to 80% of the cost for
 - ❖ Undertaking various studies relating to preparation of CMP
 - ❖ Launching of awareness campaign and
 - ❖ Developing Clean development mechanisms etc...
- ❖ For preparation of Detailed Project Reports (DPR) Financial assistance is given upto 50% of the cost of preparation of DPR
- ❖ Training of trainers and practitioners
- ❖ Institute of Urban Transport to support ministry in capacity building initiatives
- ❖ 4 Centres of Excellence in Urban Transport
 - ❖ CEPT University, Ahmedabad
 - ❖ IIT, Delhi
 - ❖ IIT, Madras
 - ❖ NIT, Warangal

**Capacity
Building
Initiatives –
Guidelines/
TOOLKITS**

**Urban Bus
Specifications**

**Comprehensive
Mobility Plan**

**Urban Street
Design
guidelines**

**Non Motorized
Transport**

**Model
Concession
Agreement for
Metro Projects**

**Parking
Measures**

**Bus
Operations
and
management**

**Bus rapid
Transit
Measures**

**Institutional
framework -
UMTA**

**PPP in urban
transport**

**Alternative
Analysis**

Standard Service level benchmarks in Urban Transport

- ❖ **Benchmarking** is to identify the gaps in service delivery and effect in improvement through the sharing of information and best practices, resulting in better services to the people through urban sector.
- ❖ It provides common minimum framework for monitoring and reporting on SLBs and Guidelines on how to operationalize in phased manner.

SSLBs in Urban Transport (total-10)

- ▶ Public transport facilities
- ▶ Pedestrian facilities
- ▶ Non motorized transport facilities
- ▶ ITS facilities
- ▶ Congestion level
- ▶ Parking
- ▶ Road safety
- ▶ Pollution levels
- ▶ Integration of land use and transport
- ▶ Sustainability of public transport
- ▶ **Overall LOS 1 to 4**
- ▶ **Each LOS computed based on number of indicators.**
- ▶ **All future projects and plans in Urban transport shall be linked to SSLBs.**

Initiatives and potential for International co-operation

- **Policy and Planning**
 - National policy for public transport sensitive to climate change
 - National policy for metro rail projects
 - Advisories/Circulars to State Govts for guiding city development and redevelopment
- **Management**
 - National public transport helpline
 - Common mobility card across India
 - Control centre based management of all Auto-rickshaws and Taxis
 - Task Force on UMTA
 - Core Group on ITS
 - National Consultant for CDM
 - Partial Funding for Urban Transport cell at ULB and UMTA in cities
- **Investment**
 - Innovative PPP to attract private financing.
 - Dedicated Urban transport fund so as to catch up with investment requirements given the pace of urbanization and increase in the travel demand.
 - Fund Innovations in ITS and Bus Technologies

Thanks

SERVICE LEVEL BENCHMARKS IN URBAN TRANSPORT

1. Public Transport facilities
2. Pedestrian Infrastructure facilities
3. Non Motorized Transport facilities
4. Usage of Intelligent Transport System (ITS) facilities
5. Travel speed along major corridors
6. Availability of Parking facilities
7. Road Safety
8. Pollution levels
9. Integrated Land Use Transport System
10. Financial Sustainability of Public Transport