



## INDIA: Country Initiatives and Achievements on Bangkok Declaration -2020

7<sup>th</sup> Regional EST Forum in Asia – 24.04.2013



सत्यमेव जयते

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# Urbanization challenges

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- ❖ 2<sup>nd</sup> Largest urban system
- ❖ 60% GDP generated from urban areas
- ❖ 7935 towns and cities as per 2011 Census
  - 9 megacities (4 million + population)
  - 53 cities with million plus population
- ❖ Urban Transport not listed in Constitution of India- Responsibilities distributed mode wise
- ❖ Motorization rates are high

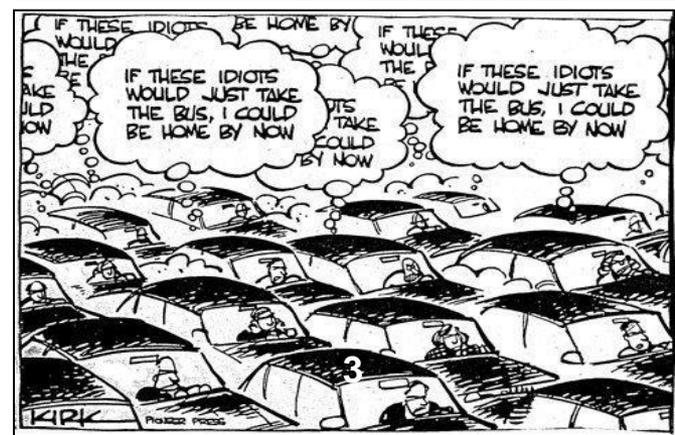
# Urban Transport Challenges

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- Sprawling cities
- Environmental Degradation
- Declining PT & NMT
- Low Investments
- Supply Side Focus
- Poor Enforcement
- Multiple Institutions
- Education of People

**In 6 Metro Cities, during 1981 to 2001  
Population increased by 2  
times BUT  
Motor vehicles increased  
by 8 times !!!**



# Urban Transport Challenges

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## Lack of institutional framework

- Multiple institutions
- No dedicated agency
- No comprehensive legislation

## Gaps in capacity

- No National centre for best practices
- Professionals not employed by cities
- Shortage of UT professionals

## Low penetration of public transport(PT)

- Poor image of public transport, poor service
- Good Public transport needs subsidy
- Intermediate public transport not organized
- Private services unsafe
- Financing constraints for good quality PT

....contd.

# Urban Transport Challenges

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## No enabling environment for NMT

- Poor brand image of NMT
- NMT infrastructure inadequate
- Cycle rickshaw considered a nuisance

## Poor road quality

- Encroachment of existing roads
- Poor drainage & surface quality
- Utility agencies damage roads

## Limited use of technology & innovation

- Unfamiliarity & lack of skills
- Innovations are not encouraged; Business as usual

# Government of India's Response

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## **POLICY RESPONSE**

- I. National Urban Transport Policy-2006
- II. National Action Plan on Climate Change
- III. National Mission on Sustainable Habitat
- IV. National Transport Policy Development Committee Report

## **PROJECT RESPONSE**

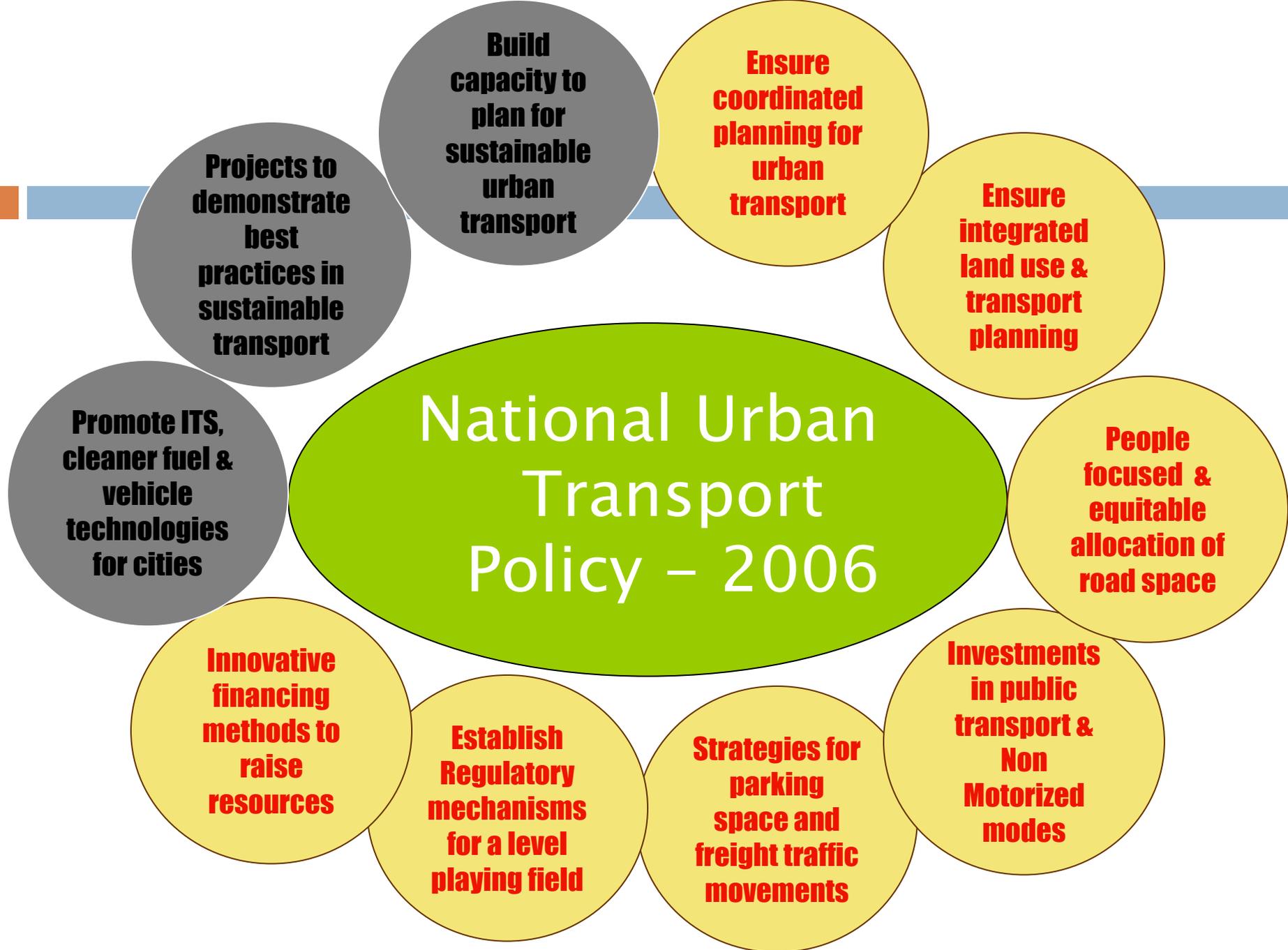
- I. JnNURM- Sector Reform Linked Investments – Bus, Rail and Related Infrastructure
- II. World bank – UNDP – GEF Sustainable Urban transport Project
- III. Promoting Cycling – Public Bicycle Scheme
- IV. Human Resources and Capacity Enhancement

# Government of India's Response contd...

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## **STANDARDS AND REGULATIONS**

- I. Urban Transport Parameters for Sustainable Habitat
- II. Service level Benchmarks for Urban Transport
- III. National Ambient Air Quality Standards for 12 Pollutants
- IV. Bharat Stage III to Bharat Stage IV auto fuel switch over



# Jawaharlal Nehru National Urban Renewal Mission (JnNURM) <http://jnnurm.nic.in/>

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- ❖ A reform based mission for Central Financial Assistance (CFA) to Urban Local Bodies
  - ❖ About 22% of the projects sanctioned under JnNURM for Urban transport (NUTP compliant)
  - ❖ Reforms for better urban transport planning and management-made conditional to the
1. CMP
  2. UMTA.
  3. Dedicated UTF
  4. TOD Policy, Parking Policy and Advertisement Policy.
  5. City specific SPV for PT.
  6. Setting up of TIMC.
  7. Use of ITS
  8. Bus priority infrastructure
  9. Periodic revision of



**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)

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- ❖ Buses contribute as the most important mode of Public transport
- ❖ BRTS Projects for 488 Kms sanctioned for 11 mission cities at a total cost of US \$ 1085 million (@US \$ 2.4 million per km)

▪ Pune	10
▪ 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
▪ Kolkata	15.00 Km

# Delhi is implementing BRTS with its own funds

\* Ahmedabad is the first city under JnNURM to have successfully launched a complete BRT system. It has won national and



# Buses for City Transport

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## ❖ **Urban Bus Specifications**

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

## ❖ **Economic stimulus package**

- ❖ Funding procurement of buses for UT under JnNURM.
- ❖ 15260 modern buses sanctioned under economic stimulus package in 2009-10 at a cost of US\$ 1020 Mn
- ❖ 61 mission cities Covered; about 14,000 buses are on road – 31st March'13
- ❖ City buses planned for 500 more cities with 50 thousand+ population in 2013-14
- ❖ Delhi has largest CNG Bus fleet in the world



**40 new cities got organised city bus service in Phase 1 of bus funding!**

BMTC FESLF DIESEL



# Urban Transport-Metro Rail Projects

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- ❖ Metro Rail supported on high demand corridors
- ❖ Reforms in urban transport made conditional to sanction

- ❖ Delhi
  - ❖ 190 kms running.
  - ❖ Phase III 136 kms sanctioned
- ❖ Bangalore- 7 kms operational
- ❖ Joint ownership with state governments in Delhi, Bangalore, Kolkata, Chennai, Kochi and Mumbai
- ❖ 20% Viability Gap Funding for Urban transport projects on PPP
  - ❖ Mumbai
  - ❖ Hyderabad

City	Kms	App. Cost	App. (US\$ Million )
Delhi	136.00	8391	
Mumbai	76.77	7040	
Bangalore	42.30	2580	
Kolkata	14.67	1037	
Chennai	46.05	3106	
Hyderabad	71.00	2638	
Jaipur	29.00	1777	
Cochin	25.30	1111	

- ❖ More projects for 15,600 million USD in pipeline
- Finding resources!- Innovative Financing**

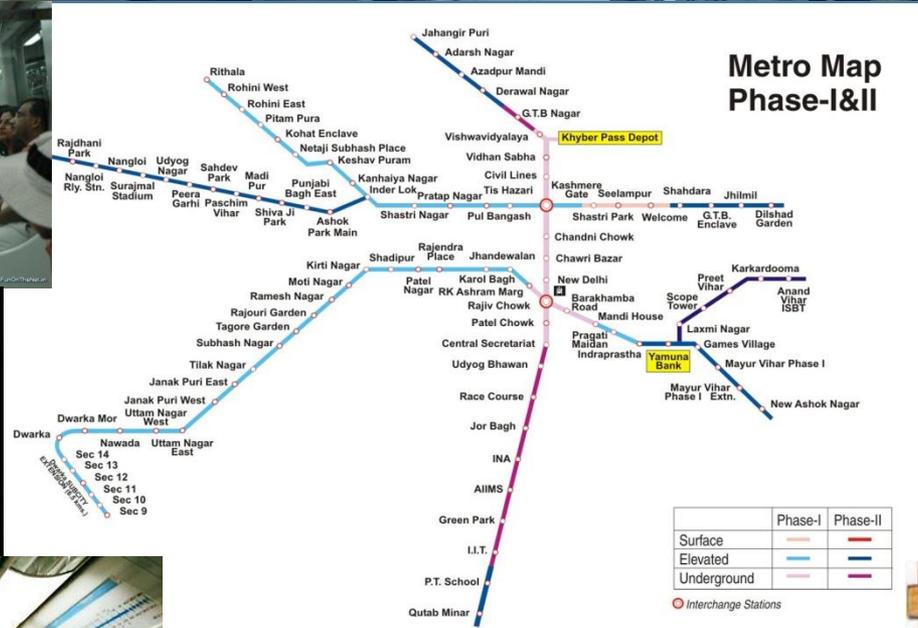


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# World Bank – UNDP – GEF Sustainable Urban Transport Project (SUTP)

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- ❖ Unique project for taking up Demonstration projects in select cities and Capacity Building across India
- SUTP – **Many Firsts in India**
  - ▣ Multilateral Agencies in Transport Sector (World Bank and UNDP)
  - ▣ Multi-City Program
  - ▣ **Moving Train Concept**
  - ▣ Specifically Aims at Addressing Objectives of NUTP
- Massive Capacity Building Effort in Urban Transport Sector
  - ▣ Training, Experience Sharing, Manual & Toolkit Development, Dissemination Program
  - ❖ Reforms in Urban transport made conditional
  - ❖ World Bank loan, Govt of India as well as State Govt/ Urban local funding, GEF grant pooled together

# Promotion of Cycling in Indian Cities – Public Bike Sharing Scheme (ongoing)

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- Developing
  - ▣ A National Cycling Policy
  - ▣ A Toolkit for Public Bicycle Scheme projects
  - ▣ Product design and Specifications for the Public Bike Schemes in India
  - ▣ Proposed Financing Mechanisms for Public Bicycle Schemes

A new scheme in 2013-14 to promote PBS with 100% funding from Govt of India for Pilot cities.



**Bike share  
scheme  
proposed in 40  
cities!**

# Human Resource and Capacity Building Initiatives

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To promote better practices:

- ❖ Central Financial Assistance up to 80% of the cost for preparation of CMP, awareness campaign and Developing CDM etc...
- ❖ For Detailed Project Reports (DPR) upto 50% of cost
- ❖ Training of trainers and practitioners
- ❖ **Annual Conference and Exhibition on Urban Mobility India in December (this year from 3<sup>rd</sup> Dec to 6<sup>th</sup> Dec)**
- ❖ Institute of Urban Transport to support ministry in capacity building initiatives
- ❖ **4 Centres of Excellence in Urban Transport**
  - ❖ CEPT University, Ahmedabad- Leaders in Urban Transport prog
  - ❖ IIT, Delhi
  - ❖ IIT, Madras
  - ❖ NIT, Warangal

**Urban Bus  
Specifications**

**Comprehensive  
Mobility Plan**

**Urban Street  
Design  
guidelines**

**Non  
Motorized  
Transport**

**Model  
Concession  
Agreement for  
Metro  
Projects**

**Capacity  
Building  
Initiatives –  
Guidelines/  
TOOLKITS**

**Parking  
Measures**

**Bus  
Operations  
and  
management**

**Bus rapid  
Transit  
Measures**

**Institutional  
framework -  
UMTA**

**PPP in urban  
transport**

**Alternative  
Analysis**

# Toolkits and Modules under finalisation-

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S.N o	TOOL KITS	MODULES
1.	Land use transport Integration	Sensitization Module
2.	Demand Modelling	Demand Assessment Module
3.	Transport demand management	Urban Transport Planning Module
4.	ITS for Traffic Management	Environment Module
5.	Public Transport Accessibility	Financing and Fare fixation Module
6.	Road Safety & Safety Audits	Public Transport Modal Integration Module
7.	Urban traffic system design evaluation	Institutional Development Module
8.	Environmental Analysis	Integrated Planning of Infrastructure Module
9.	SIA and R&R plan	Traffic Engineering and Traffic Management Module

# Standard Service level benchmarks in Urban Transport

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- ❖ **Benchmarking** to identify the gaps in service delivery and effect in improvement through the sharing of information and best practices.
- ❖ Common minimum framework for monitoring and reporting
- ❖ 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**

# Other Initiatives Relating to Urban Transport

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- **Policy and Planning**
  - National Environment Policy 2006
  - 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
  - **National Common mobility card across India-“More”**
  - Control centre based management of all Auto-rickshaws and Taxis
  - Task Force on UMTA
  - National 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.

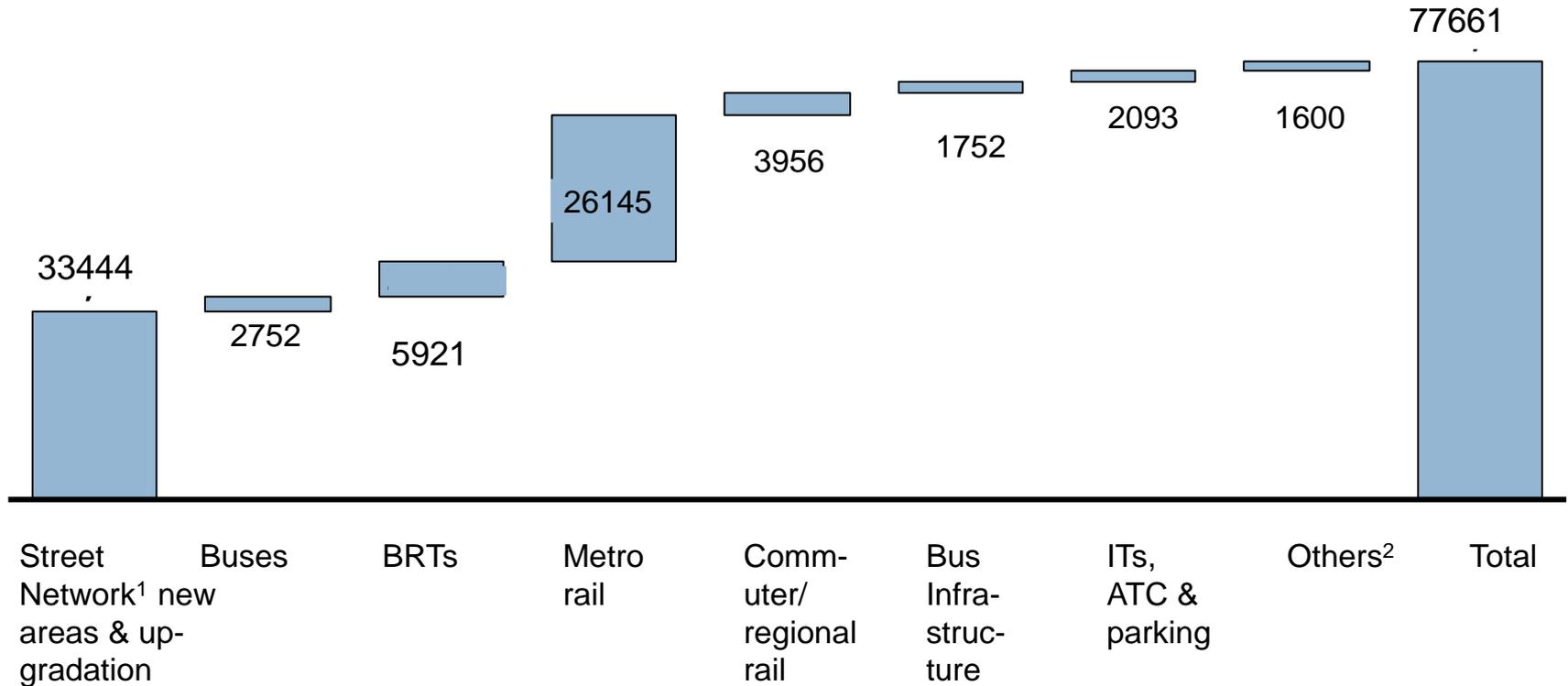
# Estimating Future Investments in Urban Transport

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In order to improve the Urban Transport Infrastructure and provide the gaps, the investment requirement is estimated as about USD 78 billion over next 5 years and USD 506 Billion in next 20 years .

# Investments by components

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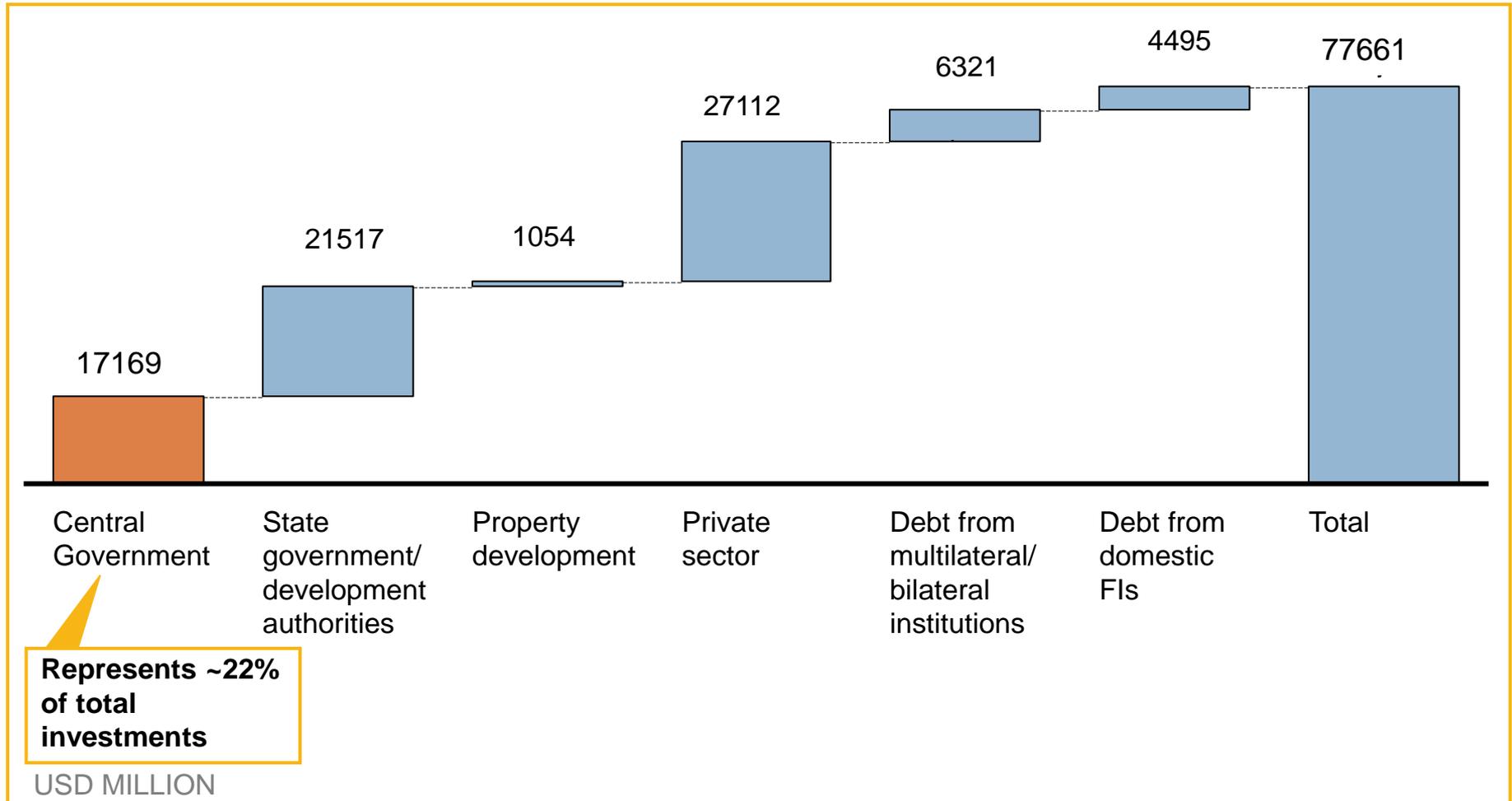
USD MILLION

1 Includes pedestrian, NMV, road & streetscape investments

2 Includes public bicycle scheme, innovation & R&D, institutions & capability building

# Investments by source of funding

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# Intervention Recommendations

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Transformational

- Set up MPC/DPC
- Set up UMTA
- UT Authority control all funds
- Set up the National UTF with green cess
- Set dept of UT in MoUD & respective state ministries

- Recognise UT in the concurrent list in constitution
- Set up a commission for UT safety
- Set up NURTA & corporatise suburban rail services
- research, design & standardization authority for rail transit
- knowledge mgt. cell & data center state level & in large cities
- jobs at the state level to absorb UT professionals
- financing UT through budget support
- UTF based on land monetization, property tax etc.

Incremental

- hierarchical road network integrated with PT
- Free up road capacity
- Regulate & coordinate work of utility agencies
- Improve maintenance

- Re-organise citywide roads for pedestrians and cycle paths
- Re-open missing links, dead-ends;
- Create bye-passes & goods terminals outside the city
- Fix street furniture, signages & lighting
- traffic signal phasing cycle
- Ensure multi-departmental action for safety/security
- new federal schemes for innovation, indigenization
- multimodal integration, enforcement & traffic management
- road pricing e.g., electronic road pricing, congestion pricing

High

Low

Govt. stakeholder complexity

# Opportunities for Collaboration

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- PPP in urban transport Systems- construction, operation and maintenance
- Modern Bus system operations
- Metros, Monorail, Trams
- Integrated transport using ITS
- Inland Waterway Transportation
- Public Bicycle Schemes
- Automated parking complexes- development and operation
- Pedestrianizing core-city areas
- Urban Planning, TOD planning
- Participation in Urban Mobility India (UMI) Conference and exhibition from 3<sup>rd</sup> to 6<sup>th</sup> December 2013 in Delhi

Have a Great Day!!