



# Urban Mass Transit Company Limited

Transiting towards Sustainable Mobility



## Unique partnership

Urban Mass Transit Company Limited (UMTC) is a unique public-private venture promoted by the Government of India (Ministry of Urban Development), Government of Andhra Pradesh, Andhra Pradesh State Road Transport Corporation and Infrastructure Leasing and Financial Services Limited (IL&FS).



## What we do

UMTC provides sustainable solutions for improving mobility in urban and suburban areas through an integrated and multimodal approach. Our mobility solutions encompass the entire life cycle of the project, i.e. ideation, concept development, planning and design, implementation and operation.

UMTC is providing its services across the urban-rural continuum covering various modes of transport in the following areas:



## Our team

Our team comprises the best in the industry with expertise in assisting local bodies and state governments in:

- Transport planning
- Transport modelling and simulation
- Traffic engineering
- Urban and land use planning
- Planning and implementation of public transport system
- Intelligent transport systems (ITS)
- Transit corridor studies
- Design and civil engineering
- Transit policy formulation and legislation
- Parking studies

UMTC draws upon expertise from various government agencies as well as international and local academic and professional institutions with which it has collaboration agreements.





# Accessibility and mobility planning

## Concept

Planning for accessibility is a critical task for all developing urban economies. Accessibility refers to the ease with which people can reach their destination. Mobility is essentially, the ability to move in cities, which are growing at a rapid pace.

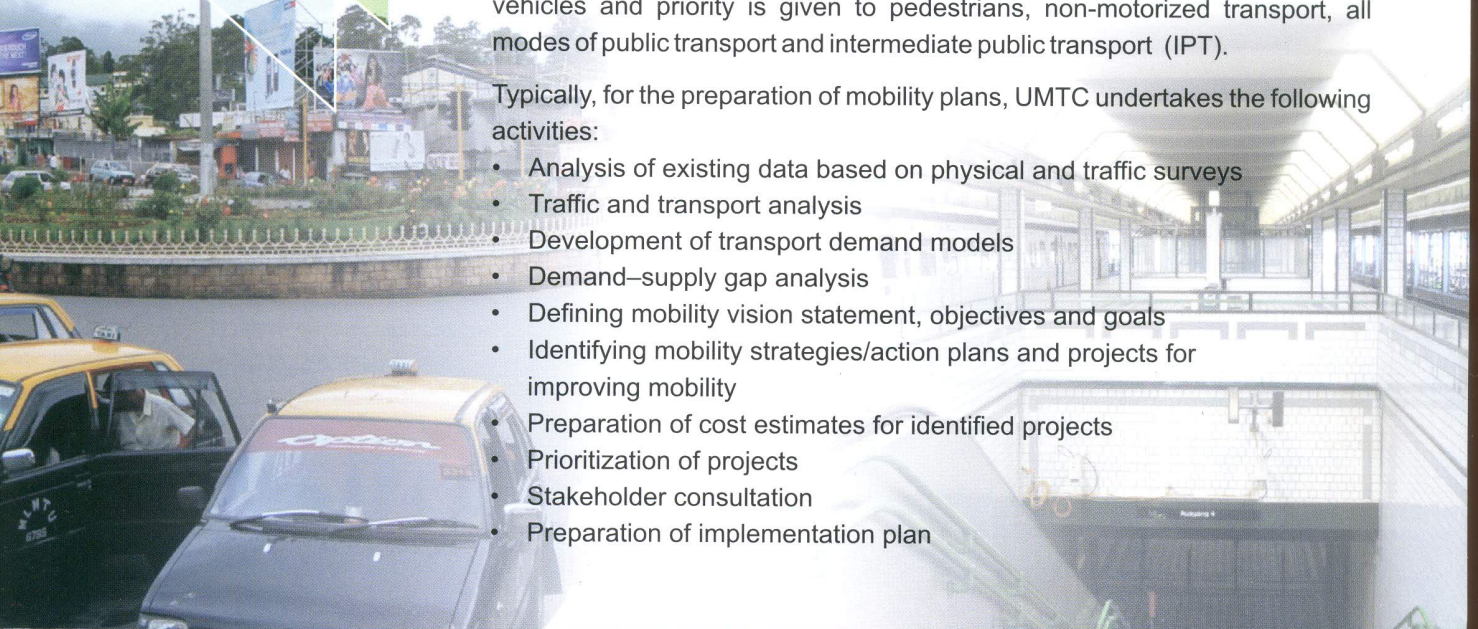
UMTC has partnered with cities and state governments to prepare vision documents and create plans at various levels for sustainable urban mobility. We are preparing mobility plans, parking master plans, and non-motorized transport (NMT) master plans for a number of cities.



## Our approach

**Mobility Plans:** These are documents that articulate the mobility vision of a city and outline the strategies and actions towards enhancing mobility and accessibility of its people. Mobility plans integrate land use planning with transport systems and offer direction for a sustainable multi-modal transport system for the city. The focus is on moving the people, rather than personal vehicles and priority is given to pedestrians, non-motorized transport, all modes of public transport and intermediate public transport (IPT).

Typically, for the preparation of mobility plans, UMTC undertakes the following activities:

- Analysis of existing data based on physical and traffic surveys
  - Traffic and transport analysis
  - Development of transport demand models
  - Demand–supply gap analysis
  - Defining mobility vision statement, objectives and goals
  - Identifying mobility strategies/action plans and projects for improving mobility
  - Preparation of cost estimates for identified projects
  - Prioritization of projects
  - Stakeholder consultation
  - Preparation of implementation plan
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## Our approach

**NMT Master Plan:** A well-defined urban mobility plan should provide for infrastructure for the movement of pedestrians and cyclists who require easy accessibility and safety.

The master plan for NMT takes a holistic approach towards providing quality infrastructure for pedestrians and cyclists and is integrated with the overall mobility plan for the city.

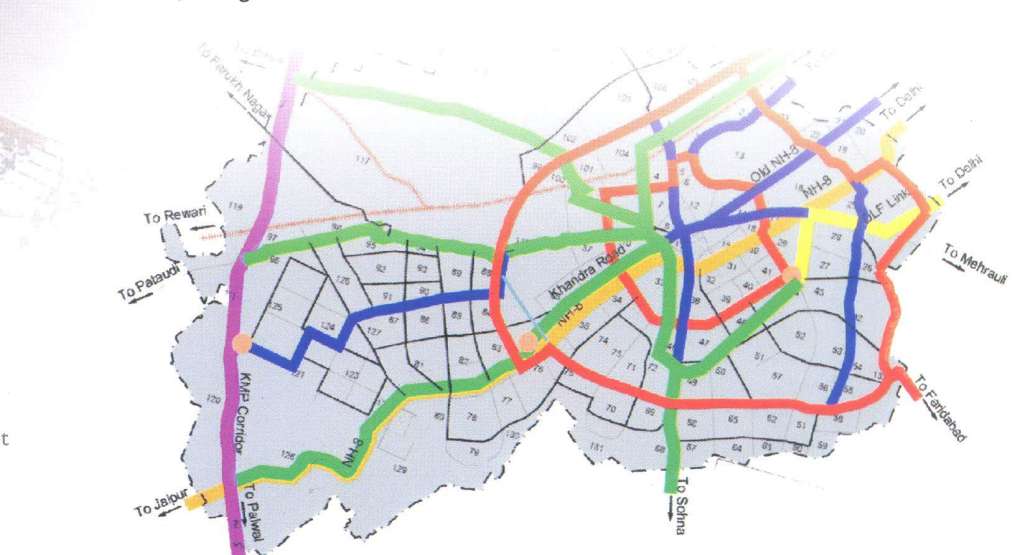
**Parking Master Plan:** The explosion of private vehicles in cities and the resultant pressure for parking space has necessitated the formation of a plan to guide the development of on-street and off-street parking spaces in cities. The parking master plan can be implemented on a public-private partnership model (PPP) or through government funding.

UMTC's team of experts in land-use, transport planning, NMT network planning, urban designing and parking planning work closely with city administrations in developing their NMT and parking master plans.

## Key projects

Some of the mobility plan mandates of UMTC are:

- Integrated Mobility Plan for Gurgaon–Manesar Region
- Integrated Mobility Plan for Ahmedabad–Gandhinagar Region
- Comprehensive Mobility Plan for Agra, Kanpur, Lucknow, Mathura, Meerut
- Comprehensive Mobility Plan for Shillong
- Comprehensive Mobility Plan for Tirupati
- Comprehensive Mobility Plan for Shimla
- Feasibility Study of Cycle Track in the neighbourhood of Madiwala Lake, Bangalore
- Concept plan for the proposed traffic integration hub and property development alongwith connectivity around Baiyappanahalli Metro Terminus, Bangalore



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# Rail-based transit systems

## Concept

Rail-based transit systems play a critical role in improving the transit network of cities and enhancing regional connectivity. The efficiency, reliability and capacity of rail-based transit systems make them a popular choice for large cities. Rail-based transit systems include metro rail, light rail, monorail system and high speed rail systems and regional rail transit systems (RRTS)

## Our approach

UMTC has been involved in preparation of DPRs and feasibility reports for rail transit systems including:

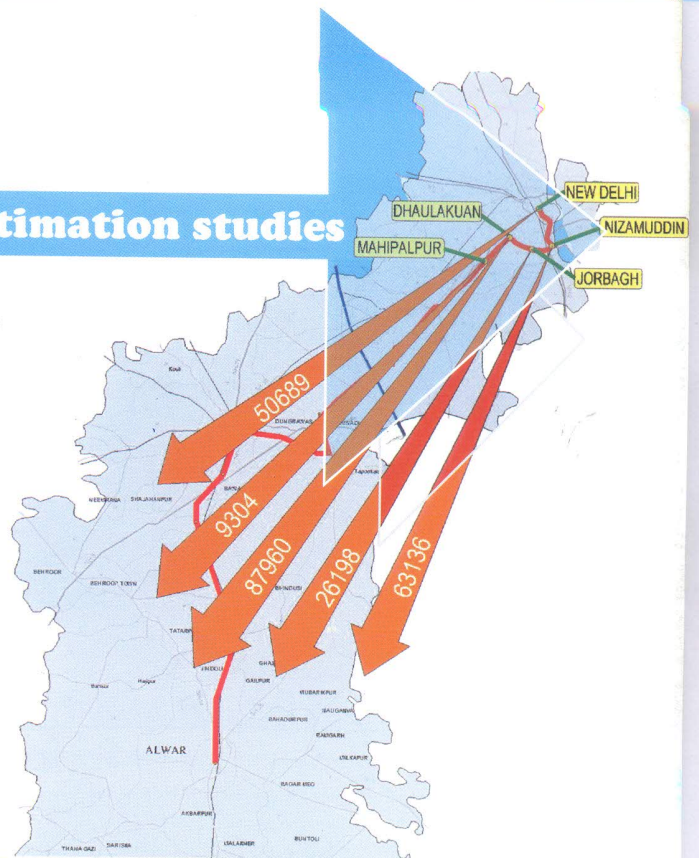
- Traffic surveys and travel demand forecasts/ridership estimates
- Alternative analysis
- Selection of technology and alignment
- System specifications
- Passenger amenities and facilities development plan
- Operational plan
- Environment and social impact studies
- Cost estimation
- Project structuring
- Financial and economic analysis
- Implementation plan and capacity building



## Traffic demand and revenue estimation studies

UMTC also has a dedicated unit for traffic demand and revenue estimation studies which involves development of a 4-stage model (i.e. Trip generation, Trip distribution, Modal split and Trip assignment) from the collected data, validating the model in terms of modal split estimation and calibrating the relevant parameters. The output is in the form of mode-wise traffic on various links and nodes on the network. As part of these studies, UMTC also estimates the traffic and the percentage shift along the proposed alignment.

As part of the traffic demand and revenue estimation studies, UMTC has expertise in using various software systems such as VISUM and CUBE VOYAGER.



## Key projects: Commuter rail services

- Feasibility study and preparation of DPR for Delhi–Alwar RRTS, National Capital Region (NCR)
- Patronage and revenue forecasting consultancy services for the bidding purpose of proposed high speed rail link project to the Bangalore International Airport (BIAL)

## Key projects: Project appraisals

- Badarpur–Faridabad Metro DPR
- Airport Metro Link Bid Documents
- DPR for East–West Corridor of Kolkata Metro
- DPR for Dwarka Sec-21 to IGI Metro Link
- DPR for Chennai Metro
- DPR for Kochi Metro
- Manual of specifications and standards for Hyderabad Metro Railway







## Bus-based public transit system

### Concept

An efficient, reliable and cost effective public transport system is the engine for economic growth of any urban agglomeration. Most cities cannot afford high cost transit systems such as light rail or metro rail and a low cost bus-based transit system is a more viable option. A bus-based system has the added advantage of flexibility and scalability.



### Bus rapid transit systems

A bus rapid transit system (BRTS) is a flexible, rubber-tyred rapid transit mode that combines stations, vehicles, services, running ways and intelligent transport system elements into an integrated system.

BRTS designs are based on the principles of improving safety, efficiency and convenience for all road users. UMTC is involved in the preparation of operational and implementation plan for BRTS in various cities in India.

Ridership estimation and route rationalization

Design inputs for:

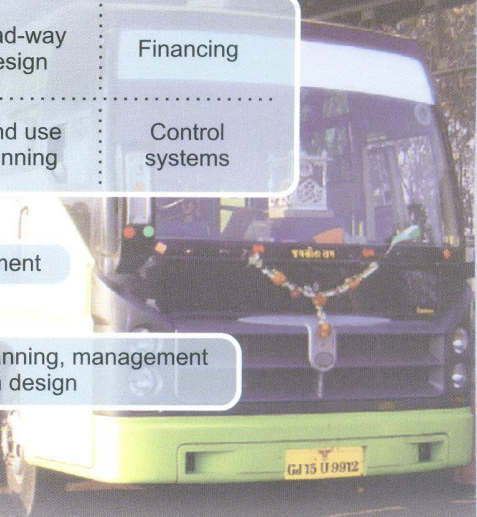
Bus specs	Bus stops	Terminals	Fare collection	Road-way design	Financing
Operating plan	Integration with other modes	Access systems	Parking	Land use planning	Control systems

Detailed design, drawings, tendering and procurement

Construction management plan, construction, monitoring and reporting

Operation stage planning, management system design

Capacity building for operations





## City bus services

A city bus service (CBS) is one of the most convenient and common public transportation systems that can effectively address the issues of congestion and high travel demand. UMTC has been closely involved in the design and implementation of a safe, efficient and reliable city bus system in various cities in India under suitable PPP models.

UMTC is providing the following services in the implementation of city bus systems:

- Bus service and operations design
- Infrastructure design
- Procurement planning and transaction advisory
- Institutional development and capacity building
- Branding and communications

## Key projects: Bus rapid transit systems

- Detailed project report (DPR) for BRTS, Guwahati
- Detailed design of pilot corridor of BRTS, Pune
- Detailed design and project management services for BRTS, Rajkot
- Design of operation plan and project management services for BRTS, Surat
- Preparation of operations plan and detailed design of BRTS, Pune
- Feasibility study for BRTS on the East-West Corridor in Delhi

## Key projects: City bus services

- Advisory services for development of CBS in Patna, Guwahati, Raipur, Bhubaneswar and Puri, Ranchi, Jamshedpur, Dhanbad and Bhopal
- Preparation of DPR for funding of buses under JNNURM for 34 Indian cities
- Preparation of the business plan for the feeder bus service to the Delhi Metro Rail Corporation (DMRC)
- Planning, implementation and operations of Hop On Hop Off tourist bus services in the city of Delhi





# Policy formulation and legislation

## Concept

Vision documents and policies comprise the nucleus of effective implementation of urban mobility solutions. Due to multiplicity of agencies and institutions working in the urban transport sector, there is a need to develop a policy and legislative framework at various levels: city, region, state and centre. The development of a policy framework for different segments of urban transport result in guiding the action plans of the agencies towards a common goal.



## Our services

UMTC is involved in developing policy and legislative frameworks in the following areas:

- State-level transport policy
- City-level parking policy
- City-level NMT policy
- City-level transit advertising policy
- Transit oriented development (TOD) policy
- Establishment of the Unified Metropolitan Transport Authority (UMTA)
- Establishment of the Urban Transport Fund (UTF)





## Capacity building

UMTC also assists cities and state governments in building capacity in the urban transport sector so as to effectively implement the policies and plans. This is done through technical assistance, training programmes, workshops and study tours to learn from the best practices followed across the world.

Position Paper  
on Sustainable  
Transport  
in India

Parking Policy &  
Advertisement  
Policy for 34 cities  
in India

Commission of  
Safety (Railways  
& Metro) Act

Institutional  
Options Study  
for BRTS in  
Hubli-Dharwad

Comprehensive  
Transport Policy  
for Haryana

Metro Rail  
Certification  
Model

Pedestrian &  
Parking Policy in  
Shillong

Establishment  
of UMTA for  
Greater AMDA

## Key projects

- Preparation of 'Position paper on sustainable transport in India', Asian Development Bank
- Preparation of comprehensive transport policy for the state of Haryana
- Project advisor for preparation of Metro Rail Safety Certification Model, Asian Development Bank
- Drafting of Commission of Safety (Railways & Metro Railways) Act
- Drafting of legislation for the establishment of a UMTA for the Ahmedabad-Gandhinagar region
- Framework development for pedestrian and parking policy in Shillong, Meghalaya
- Framework development to establish parking policy and advertisement policy for 34 cities in India
- Institutional options study for BRTS in Hubli-Dharwad, Karnataka for the World Bank



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# Transaction advisory services

## Concept

The rapid urbanization that we have experienced in the last decade has resulted in the need for the up-gradation of the existing urban infrastructure. The implementation of new infrastructure can be carried out either by way of government funding or through PPP. To this end, UMTC plays a critical role by offering transaction advisory services in the selection of an appropriate developer/ operator/ contractor.



## Our approach

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- Technical and financial feasibility report
  - Project structuring within the legal and regulatory framework
  - Financial structuring and packaging
  - Risk assessment and mitigation strategies
  - Developing final contractual framework
  - Preparation of Expression of Interest (Eoi)/Request For Qualification (RFQ)
  - Preparation of Request For Proposals (RFP) and managing the bid process
  - Evaluation of Eoi and RFPs
  - Assistance in finalization of contract and signing of agreement with the successful operator/ developer
  - Developing a roadmap for cost of implementation including arrangement of equity and debt to undertake the project on a commercially viable format





## Key projects

- Advisory services for developing multilevel parking projects at various locations in Mumbai
- Advisory services for development of bus terminals for Andhra Pradesh State Road Transport Corporation
- Selection of operator and service providers for running city bus service in seven cities in India
- Selection of operator and service providers for BRTS in Surat, Rajkot in India



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